Annual Report

Survey Results

From the 2006 Iowa BRFSS

Iowa Department of Public Health
Bureau of Health Statistics

Chester J. Culver, Governor, Patty Judge, Lt. Governor
Thomas Newton, MPP, REHS, Director

Completed in cooperation with the Centers for Disease Control and Prevention,
Division of Adult and Community Health, NCCDPHP,
Behavioral Surveillance Branch

IDPH
Iowa Department of Public Health

Acknowledgements

This report was prepared by Donald H. Shepherd, Ph.D.
Iowa BRFSS Coordinator
Bureau of Health Statistics
Division of Administration
Iowa Department of Public Health

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For additional information, contact Donald Shepherd
(515) 281-7132
dshepher@idph.state.ia.us

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1. INTRODUCTION

History

In 1981, the Centers for Disease Control and Prevention (CDC) began assisting states in conducting a risk factor survey to monitor behaviors associated with premature death and disability. Then, in 1984, the CDC launched the Behavioral Risk Factor Surveillance System (BRFSS) working in an ongoing fashion with several states to assess the health status and health risk behaviors of their citizens.

A point-in-time survey was done in Iowa in 1982. In 1988, Iowa began full participation in BRFSS. The BRFSS is now conducted in all 50 states, the District of Columbia, Puerto Rico and the Virgin Islands.

Nature of the Survey

The Iowa Behavioral Risk Factor Surveillance System (BRFSS) is an ongoing telephone survey. It is financially and technically supported by the Centers for Disease Control and Prevention with further financial support from public and private sources within the state.

The BRFSS is designed to collect information on the health conditions, health risk behaviors, attitudes, and awareness of residents age 18 and over. It also monitors the prevalence of these indicators over time. The indicators surveyed are major contributors to illness, disability and premature death.

This report focuses on the data collected during calendar year 2006. Some of the risk factors discussed are: general health status; health care coverage; cigarette smoking; alcohol consumption; body weight; cancer screening for colorectal cancer; women's health issues (including screening for breast and cervical cancer); diabetes; asthma; and HIV/AIDS awareness.

Objectives

The objectives of the BRFSS are:

1. To determine the state specific prevalence of personal health behaviors related to the leading causes of premature death.

2. To develop the capacity of state health departments to conduct credible telephone surveys.

3. To advance the understanding that certain health-related behaviors are critical indicators of health.

Use of BRFSS Data

The Centers for Disease Control and Prevention developed the Behavioral Risk Factor Surveillance System to help states assess health risks and monitor trends. Comparable surveillance methods are used in all states. This allows for comparisons among states and for the assessment of geographic patterns of risk factor prevalence.

The BRFSS information is used to design, implement, and support public health activities. These activities are designed to reduce the premature death and disability of Iowa residents. State public health departments are responsible for planning, implementing, and evaluating disease prevention programs. Many of these programs involve health risk behavior modification. Examples of health risk behavior modification programs in Iowa are the Clean Indoor Air Act, healthy baby campaigns; nutrition and physical activity campaigns such as Iowans Fit for Life or Lighten Up Iowa, tobacco counter-marketing campaigns, and campaigns against problem drinking.

One way to assess program effectiveness is to monitor the prevalence of risk factors in the population. Comparing different times, demographic groups, or geographic areas may be quite useful in developing, implementing and evaluating intervention programs.

2. Methodology

Questionnaire Design

The BRFSS questionnaire is updated each year by the CDC and by each participating state.

The questionnaire consists of three sections: 1) the core questions required of all states participating in BRFSS; 2) a set of standardized modules developed by the CDC which states may opt to include in their survey; and 3) state-added questions which are designed and administered by individual states to address locally identified health problems. Core and optional module questions were previously tested. Any changes in them were discussed and determinations were made whether to include them at the annual BRFSS conference. A group of interested individuals from the Iowa Department of Public Health guided by the state coordinator met to discuss which optional modules and state-added questions to include in the coming year.

Participation by Iowans in the BRFSS survey is random, anonymous, voluntary and confidential. Survey participants are requested to provide such demographic information as age, sex, race, marital and employment status, household income, educational level, and location of residence by county and zip code. This location information is suppressed in public use data when the numbers are so small that the respondent might be identified.

Sampling Process

Only adults residing in households were interviewed. People residing in group homes or institutions were not sampled. Interviews were also not performed with people over cell phones. Households were selected using list-assisted random-digit dialing. This method provides a list of randomly chosen phone numbers from the pool of all existing phone numbers. These numbers are not drawn in a simple random fashion, but use what is known as the disproportionate stratified sampling technique (DSS). This sampling methodology was designed to produce a random sample of Iowa telephone numbers, including unlisted numbers and new subscribers in an efficient fashion.

The DSS method divides phone numbers into two strata. The first stratum is residential but unlisted. The second stratum is composed of residential listed numbers. Each stratum was sampled at a different rate. The listed residential numbers were sampled at the highest rate. Some numbers were marked by the list provider as not to be called because they have been predetermined to be nonresidential or nonworking. There was no set number to be sampled per group, and completed interviews were not thrown out.

The sample was also stratified into six geographic regions. These regions are the same regions used by health resource and emergency planning groups within the state. Geographic regions were represented at the same proportion as their population within the state. Four of these regions were further subdivided into counties having a relatively high minority population and counties having low or no minority population based on the most recent census estimates and past survey experience. The minority counties were sampled at a higher rate than the non-minority counties in an effort to better represent minority groups in the Iowa sample.

Approximately equal numbers of interviews per month were conducted from January through December in 2006 for a total sample size of 5,437. Interviews were conducted in both English and Spanish. There were 5,391 English interviews and 46 Spanish interviews. Interviewers made multiple attempts to reach a number to complete an interview before replacing that number.

One person residing in the home, 18 years or older was randomly selected to answer the survey. If the person selected was not available, an appointment was made to complete the interview at another date and time. If the person was not available during the interview period, or if the person refused to participate, no other member of that household was interviewed. Attempts were made to convert initial refusals into participants.

The Interview Process

The interviews were conducted daytime, evenings, and weekends with appointments made as needed to schedule or complete interviews. The average time to complete an interview was 19.6 minutes. Spanish interviews took much longer. The response rate, defined as completed interviews + partial completes divided by all eligible households called, was 42.3%. A partial complete is an interview that was terminated before it was complete, but sufficient data had been collected to use for most measures.

A Computer Aided Telephone Interviewing (CATI) system was used. The CATI system not only assists interviewers in presenting the questionnaire and recording the responses, it also helps keep track of appointments and callback attempts, and reports statistics of call dispositions. Data then were edited for accuracy and completeness using software provided by CDC. After editing, monthly data were submitted to the CDC and to the Iowa Department of Public Health.

Advantages and Limitations

Telephone interviews provide a means to conduct affordable surveys to monitor the prevalence of behavioral risk factors. Surveys based on telephone interviews are much faster to complete than surveys based on in-person interviews.

In one hour, an experienced telephone interviewer can handle busy numbers, calls not answered, and refusals to participate, and still successfully complete one and one-half interviews. In contrast, in one day of in-person interviewing, many miles of travel may be required with few interviews completed.

Another advantage of telephone surveys is the much higher response rate compared to self-administered surveys, such as mail surveys.

Supervision and administration are simpler for telephone interviews than for in-person interviews. All calls can be made from one central location, and supervisors can monitor interviewers for quality control.

There is one main limitation to telephone surveys. All Iowans are not reachable by traditional telephone service. Some do not live in households but are in institutions such as nursing homes or prisons. Some households do not have telephones. Persons of low socioeconomic status are

less likely than persons of higher socioeconomic status to own telephones and are therefore under-sampled. Increasingly young people are opting not to use traditional landline telephone service in favor of cell phones.[10] Furthermore, the percentage of households with a telephone varies by region.

New telephone technology such as caller I.D., and call blockers that block telemarketers also pose problems for telephone surveys.

Despite these limitations, prevalence estimates from the BRFSS correspond well with findings from surveys based on in-person interviews, including studies conducted by the National Center for Health Statistics and the American Heart Association.

Some inaccuracy is expected from any survey based on self-reported information. For example, respondents are known to under-report their weight and inaccurately recall dietary habits. The potential for bias must always be kept in mind when interpreting self-reported data.

Analysis of the data

When analyzing BRFSS data, conclusions are to be drawn about the entire adult population of the state of Iowa. However, since only a sample of randomly chosen people is asked the questions, the true prevalence in the population can only be estimated. Some of the factors involved in making such estimates must be considered. First, data were weighted to Iowa's population. Weighting took into consideration the facts that the number of adults per household and the number of phone numbers per household influence a person's likelihood of being included in the survey. Next, weights were adjusted to match Iowa's population by age, gender, and region. The state's population estimates were derived from the most currently available census data files.

The judgment of the value of prevalence in a population, such as the state based on the prevalence within a sample, always involves educated guesswork. The prevalence values from the survey and the real state prevalence values may differ by some amount, but the probability of the amount of difference can be determined.

Charts and tables in this report will indicate a range of values based on the survey in which there is a 95% chance of the true Iowa value falling. This range is referred to as a 95% confidence interval (CI). Charts will indicate this by use of a black line at the end of the bars in the chart. The end of the bar is the sample value, while the value in the population is probably somewhere in the range represented by the line. It is usually the case that when the CIs of two or more groups do not overlap, their population values are truly different.

An important factor in determining how well we can judge the response of all Iowans from the survey sample is the number of responses to the questions. The smaller the number of responses, the poorer is our ability to draw a conclusion about the whole state. Analyzing the data by such categories as age, sex, income, and educational level means there are a smaller number of interviews in each particular group than in the whole survey. Furthermore, many questions are only answered depending on the answer to previous questions. For instance, a person would only be asked at what age they were diagnosed with diabetes if they answer "yes" to whether they have ever been told they had diabetes. These smaller numbers decrease the ability to determine statistically significant differences. Some data may not be reported as significant solely due to small sample sizes. In general, data in which the number of observations is less than 50 or the 95% confidence interval is larger than 20% will not be reported since these data are considered highly unreliable.

Some people refuse to answer select questions but choose to respond to the majority of the questions. Those interviews were still used in the final count for the total sample size. However, they were not counted on the specific questions they refused. Unless otherwise indicated, prevalence measures do not include those who refused to answer a question or said they did not know.

3. DEMOGRAPHICS OF THE BRFSS RESPONDENTS

The 5,437 respondents in the BRFSS for the year 2006 included 2,179 males and 3,258 females age 18 years and older. The following tables present the distribution of the respondent sample by 1) age and gender, 2) race/ethnicity, 3) level of education, and 4) household income

Table 3.1: Distribution of Iowa Survey Respondents by Age and Gender for Year 2006

Age	Male		Female		Total	
	#	%	#	%	#	%
18-24	90	4.1	136	4.2	226	4.2
25-34	257	11.8	381	11.7	638	11.7
35-44	406	18.6	537	16.5	943	17.3
45-54	487	22.4	629	19.3	1,116	20.5
55-64	390	17.9	568	17.4	958	17.6
65-74	303	13.9	445	13.7	748	13.8
75+	234	10.7	531	16.3	765	14.1
Unk/Ref	12	0.6	31	1.0	43	0.8
Total	2,179	40.1	3,258	59.9	5,437	100.0

Table 3.2: Distribution of Iowa Survey Respondents by Race/Ethnicity for Year 2006

Race/Ethnicity	# of Total Respondents	% of Total Respondents
White Non-Hispanic	5,107	93.9
Black Non-Hispanic	81	1.5
Other Non-Hispanic[1]	94	1.7
Hispanic	132	2.4
Refused	23	0.4
Total	5,437	100.0

Table 3.3: Distribution of Iowa Survey Respondents by Level of Education for Year 2006

Level of Education	# of Total Respondents	% of Total Respondents
Less than High School	385	7.1
High School Grad or GED	1,920	35.3
Some College or Technical School	1,444	26.6
College Graduate	1,677	30.8
Unknown/Refused	11	0.2
Total	5,437	100.0

[1] Other Non-Hispanic also includes those who chose multiple race categories.

Table 3.4: Distribution of Iowa Survey Respondents by Household Income for Year 2006

Household Income	# of Total Respondents	% of Total Respondents
<$15,000	437	8.0
$15,000-$24,999	754	13.9
$25,000- 34,999	619	11.4
$35,000-$49,999	885	16.3
$50,000-$74,999	944	17.4
>=$75,000	1,047	19.3
Unknown/Refused	751	13.8
Total	5,437	100.0

4. GENERAL HEALTH STATUS OF IOWANS

Background

In public health and in medicine, the concept of health-related quality of life refers to a person's or group's perceived physical and mental health over time. Physicians have often used health-related quality of life (HRQOL) to measure the effects of chronic illness in their patients to understand better how an illness interferes with a person's day-to-day life. Similarly, public health professionals use health-related quality of life to measure the effects of numerous disorders, short- and long-term disabilities, and diseases in different populations. Tracking health-related quality of life in different populations can identify subgroups with poor physical or mental health and can help guide policies or interventions to improve their health.[16]

Self-ratings of health, or health-related quality of life, seek to determine how people perceive their own health and how well they function physically and psychologically during their usual daily activities. These indicators are important because they can assess dysfunction and disability that are not measured by standard morbidity and mortality measures.

General health status defined by responses to a single question such as "How is your health, in general?" have been found to be significant predictors of mortality.[41] Additional studies that controlled for objective health status, age, sex, life satisfaction, income, residence, and other factors continue to find that the risk of mortality is two to six times greater for those individuals who had reported earlier that their health was bad or poor, compared to those who had reported their health as excellent.[34,44] The risk associated with poor self-rated health was actually higher than the risks associated with poor health status assessments by a physician.[44]

General Health Status Results

In 2006, when asked how their health was in general, 19.3% of respondents reported that it was excellent. Another 36.4% said it was very good. While 31.3% reported good health, 13% rated their health as fair or poor. This figure for fair or poor health is higher than the 12.2% figure found in 2005 and is the highest this figure has been. Figure 4.1 shows that the trend in prevalence of fair or poor health has been upward in recent years.

Age, education, household income, and race/ethnicity all had a significant impact on reported health status (see table 4.1). Household income had the most impact on reporting fair or poor health. While only 3.5% of those with incomes of $75,000 or over reported fair or poor health, 38.4% of those with incomes below $15,000 did so (see figure 4.2). Other respondents who were likely to report having fair or poor health were those with less than a high school education, non-White or Hispanics, and those 75 years old and older. Those with a college education, those with household incomes between $50,000 and $75,000, and those age 35 to 44 years all reported less than 7% with fair or poor health.

In answer to the question about how many days during the past 30 days was their physical health not good, 68.8% of respondents reported none of the days, 20.7% reported one to seven days, 1.8% reported eight to 13 days, and 8.7% reported 14 days or more. As shown in Table 4.2,

Figure 4.1: Percentage of Iowans Reporting Their Health as Fair or Poor 2000-2006

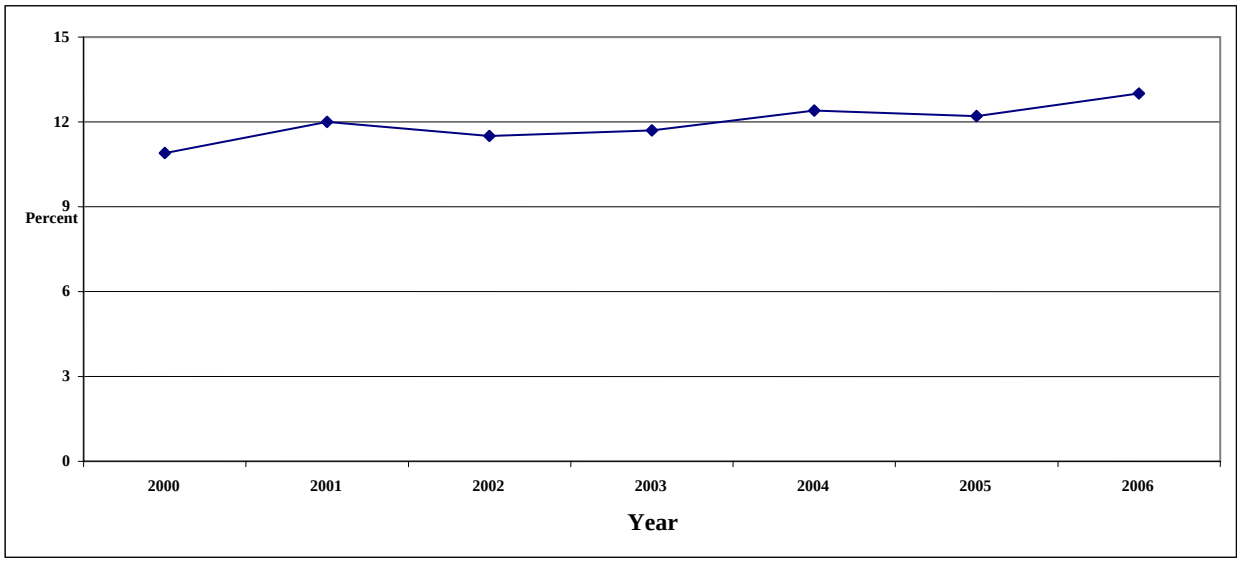
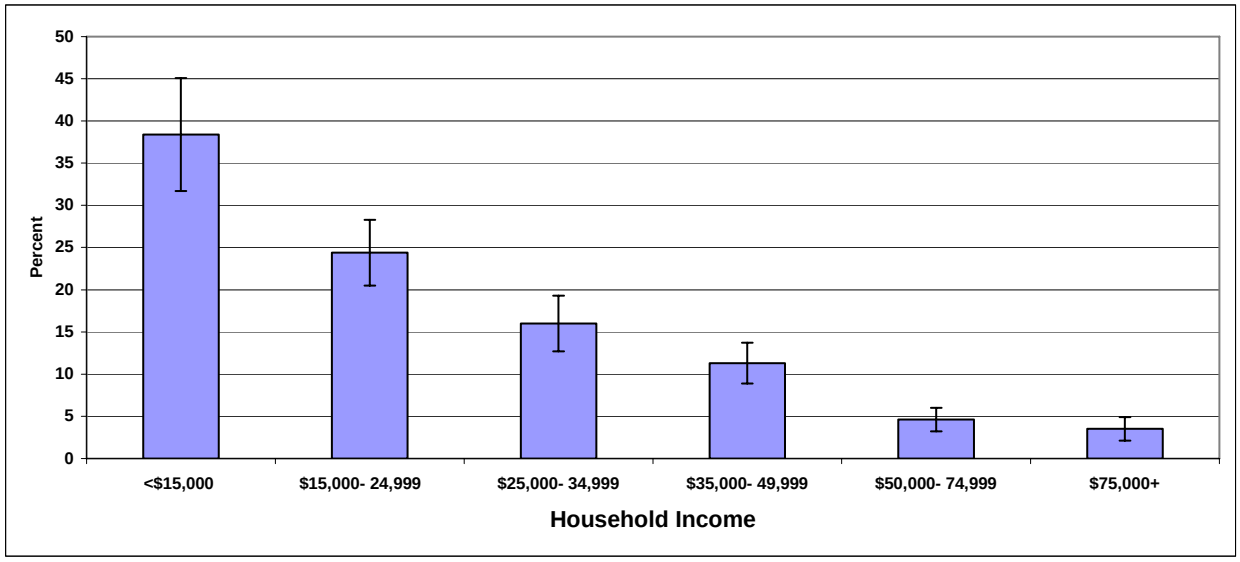


Figure 4.2: Percent of Iowans Reporting Their Health as Fair or Poor by Household Income 2006



males had fewer days of physical health not being good than females. There were also fewer bad physical days with younger age, higher education, and higher income. White non-Hispanics also reported fewer days of bad physical health. Once again, household income had the greatest impact. Only 51.4% of people with household incomes less than $15,000 reported no bad physical health days, while people with household incomes of $75,000 or more had the highest (73.7%). People age 18 to 24 years old actually had the lowest percent reporting 14 or more bad physical health days (3.6%), but they also had a fairly small percent reporting no bad physical health days.

Table 4.1: Percentage of Self-Reported Fair or Poor General Health Status, 2006

DEMOGRAPHIC GROUPS	General Health Status Fair or Poor	
	%	C.I. (95%)
TOTAL	13.0	(11.9-14.1)
SEX		
Male	13.0	(11.2-14.8)
Female	12.9	(11.7-14.1)
RACE/ETHNICITY		
White/Non-Hisp.	12.0	(11-13)
Non-White or Hisp.	25.6	(17.9-33.2)
AGE		
18-24	7.8	(3.3-12.3)
25-34	7.5	(5.1-9.9)
35-44	6.2	(4.6-7.8)
45-54	12.9	(10.5-15.3)
55-64	14.7	(12.3-17.1)
65-74	21.2	(18-24.5)
75+	31.1	(27.4-34.7)
EDUCATION		
Less Than H.S.	34.5	(27.8-41.2)
H.S. or G.E.D.	17.2	(15.2-19.2)
Some Post-H.S.	9.3	(7.7-10.9)
College Graduate	6.2	(5-7.4)
HOUSEHOLD INCOME		
<$15,000	38.4	(31.7-45.1)
$15,000- 24,999	24.4	(20.5-28.3)
$25,000- 34,999	16.0	(12.7-19.3)
$35,000- 49,999	11.3	(8.9-13.7)
$50,000- 74,999	4.6	(3.2-6)
$75,000+	3.5	(2.1-4.9)

When responding to the question of how many days during the past 30 days their mental health was not good, 71.5% of the respondents indicated none of the days, 18.7% reported one to seven days 2.5% reported eight to 13 days, and 7.3% reported 14 or more days. Table 4.2 shows the pattern for bad mental health days. The group with the lowest percentage of no bad mental health days was age 18 to 24 (58.4%), while those with the highest percentage were age 75 and older (86.2%). On the other hand, those with the lowest percentage experiencing frequent mental distress (14 or more bad mental health days) were those with household incomes of $75,000 or more (4.5%), while those with the highest were those with household incomes of less than $15,000 (20.1%).

When asked how many days poor physical or mental health kept them from performing their usual activities, 62.6% of those with some days of either bad physical or mental health said none. On the other hand, 10% said 14 days or more. This level increased with increasing age, decreasing education, and decreasing income. Only 2.7% of 18 to 24 year olds reported greater than 14 days of such poor health, while 27.5% of those with household incomes less than $15,000 reported it

Comparison with Other States

The percentage of people rating their health as fair or poor throughout the states and territories ranged from 10.8% to 32.9%. The worst state seemed to be an outlier, since the second worst rate was only 23.1%. The median value was 14.8%. Iowa ranked better than the median in health status with only 13% rating their health as fair or poor.

Table 4.2: Percentage of Reported Days of Poor Physical or Mental Health in Past 30 Days, 2006

DEMOGRAPHIC GROUP	Days of Poor Physical Health		Days of Poor Mental Health		Days Poor Health Kept from Usual Activities	
	None	14 –30 days	None	14 --30 days	None	14 --30 days
TOTAL	68.8	8.7	71.5	7.3	62.3	10.0
SEX						
Male	73.2	7.6	76.6	6.5	61.8	10.5
Female	64.5	9.8	66.7	8.0	62.6	9.6
RACE/ETHNICITY						
White/Non-Hisp.	68.9	8.6	71.8	6.9		
Non-White or Hisp.	67.4	10.6	68.2	12.3		
AGE GROUP						
18-24	63.3	3.6	58.4	9.8	69.1	2.7
25-34	70.8	5.8	63.1	7.6	63.9	5.7
35-44	72.6	4.7	69.1	8.1	66.6	6.7
45-54	69.4	8.7	71.2	7.0	56.1	10.4
55-64	68.6	11.2	78.9	6.1	57.2	15.7
65-74	70.2	13.8	84.1	5.2	58.7	18.9
75+	62.8	20.0	86.2	6.2	59.3	23.1
EDUCATION						
Less than H.S.	61.5	16.6	65.0	17.3	57.6	18.3
H.S. or G.E.D.	69.3	11.0	74.6	8.2	63.3	12.4
Some Post-H.S.	69.7	7.1	70.7	6.1	62.8	8.6
College Graduate	69.0	5.6	70.7	4.7	61.9	6.2
HOUSEHOLD INCOME						
Less than $15,000	51.4	26.6	60.3	20.1	46.3	27.5
$15,000- 24,999	62.7	15.4	71.0	10.4	53.0	16.8
$25,000- 34,999	68.2	11.1	71.5	10.0	61.9	11.1
$35,000- 49,999	69.3	6.8	71.3	4.9	68.4	7.8
$50,000- 74,999	72.6	4.2	71.9	4.7	65.3	4.1
$75,000+	73.7	3.6	73.9	4.5	65.3	4.6

5. INSURANCE COVERAGE AND ACCESS TO HEALTH CARE

Background

Access to health care is important for the prevention of disease, the detection of illness through screening, treatment, and management of illness and injuries. Adults who have a usual source of care are much more likely to use the health care system and obtain needed services.[49]

For those who lack health insurance, it may be impossible to obtain adequate health care. This not only includes expensive surgery and hospital stays, but also preventive care, management of chronic disorders such as diabetes or hypertension, and emergency treatment. Such a lack of access to health care allows small easily treatable problems to become major health problems for many individuals.[30]

Accurate estimates of the uninsured are difficult to obtain. Much of this difficulty is due to the characteristics of the population lacking insurance. Examples include working in small companies that do not provide insurance as an employee benefit, being unemployed, or lacking a permanent residence.

Health care costs are escalating at an ever-increasing rate. This is especially true of particular sectors of costs such as pharmaceuticals. Such increases hit harder on individuals without health insurance and/or those living on fixed incomes.

Health Coverage Results

In 2006, 10.5% of the survey respondents reported they had no health insurance. This is about the same as that found in 2005 (10.7%). The rate of uninsured Iowans has been nearly unchanged for the past three years (see figure 5.1).

Table 5.1 shows that more males lacked health insurance than females. Furthermore, younger people, less educated people, people with lower incomes, and racial and ethnic minorities were more likely to lack any health care coverage. Non-White or Hispanic respondents had the highest percentage of individuals without health care coverage (30.2%). Almost everyone age 65 years and older had health care coverage due to Medicare. The group with the second lowest percentage of uninsured was those with household incomes of $75,000 and higher (2.5%). The difference between men and women in the percentage that did not have health insurance was most pronounced in the 18 to 24 year age group (see figure 5.2). The difference between the sexes was rather small at all other ages.

Two other demographic variables that had a major impact on health care coverage were employment status and marital status. Those respondents who were out of work had the highest percentage not covered by health insurance (24%). Only 2.6% of retirees were without health insurance.

Figure 5.1: No Health Insurance Coverage Trend Iowa 1997 – 2006

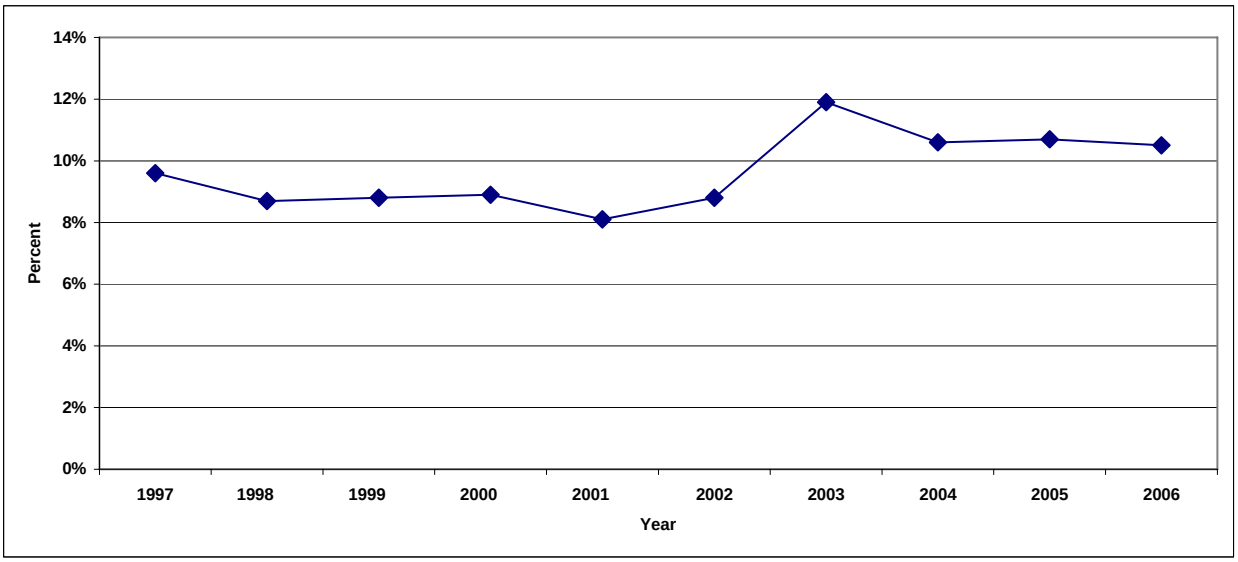


Figure 5.2: Percentage of Iowans Reporting No Health Insurance Coverage by Sex and Age, 2006

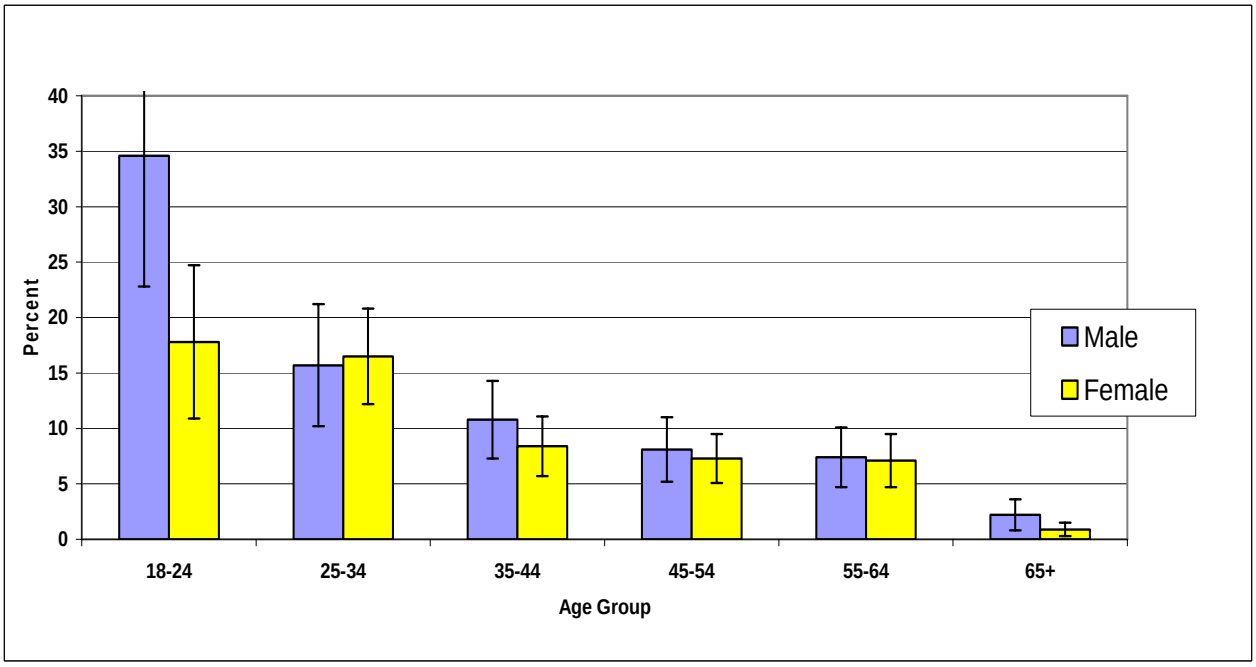


Table 5.1
Percentage of Responses to Health Care Coverage and Access Questions in Iowa, 2006

DEMOGRAPHIC GROUPS	No Health Insurance Coverage		Time Couldn't Afford Help		Have One Person As Health Provider	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	10.5	(9.3-11.7)	7.8	(6.9-8.7)	78.2	(76.8-79.6)
SEX						
Male	12.3	(10.1-14.5)	6.7	(5.3-8.1)	71.5	(69-74)
Female	8.8	(7.4-10.2)	8.8	(7.6-10)	84.4	(82.8-86)
RACE/ETHNICITY						
Non-Hispanic White	9.0	(7.8-10.2)	7.0	(6.2-7.8)	79.5	(78.1-80.9)
Non-White or Hisp.	30.2	(22.2-38.2)	17.2	(11.6-22.8)	61.1	(53.2-69.1)
AGE						
18-24	26.2	(19.3-33.1)	7.7	(4.2-11.2)	65.6	(58.5-72.7)
25-34	16.1	(12.6-19.6)	10.9	(8-13.8)	71.4	(67.3-75.5)
35-44	9.6	(7.4-11.8)	9.6	(7.4-11.8)	78.9	(76-81.8)
45-54	7.7	(5.9-9.5)	8.3	(6.3-10.3)	79.5	(76.8-82.2)
55-64	7.2	(5.4-9)	6.7	(4.9-8.5)	84.9	(82.4-87.4)
65+	1.4	(0.8-2)	3.4	(2.4-4.4)	85.7	(83.7-87.7)
EDUCATION						
Less than H.S.	27.6	(20.9-34.3)	15.0	(10.1-19.9)	65.9	(59.2-72.6)
H.S. or G.E.D.	11.1	(8.9-13.3)	8.7	(6.9-10.5)	78.9	(76.5-81.3)
Some Post-H.S.	10.4	(8-12.8)	8.7	(6.9-10.5)	78.8	(76.1-81.5)
College Graduate	5.6	(3.6-7.6)	3.9	(2.9-4.9)	79.7	(77.2-82.2)
HOUSEHOLD INCOME						
Less than $15,000	25.5	(19.4-31.6)	23.6	(18.3-28.9)	69.0	(62.9-75.1)
$15,000- 24,999	22.8	(18.1-27.5)	14.4	(11.3-17.5)	73.1	(68.6-77.6)
$25,000- 34,999	14.8	(10.7-18.9)	12.5	(9.2-15.8)	76.0	(71.5-80.5)
$35,000- 49,999	8.7	(6-11.4)	6.5	(4.7-8.3)	78.4	(74.9-81.9)
$50,000- 74,999	5.3	(2.8-7.8)	3.6	(2.2-5)	79.9	(76.6-83.2)
$75,000+	2.5	(0.9-4.1)	1.9	(0.5-3.3)	84.1	(81.4-86.8)

People who were married were much more likely to have health care coverage than those who were not. Only 6.1% of married respondents were without coverage, while 19.1% of unmarried respondents were without it.

When asked if there was a time in the past 12 months when they needed to see a doctor but could not because of the cost, 7.8% said that there was. The percentage was higher for females, younger people, people with less education, people with lower incomes, and racial and ethnic minorities. The lowest percentage (1.9%) was for people with household incomes of $75,000 or more. The highest percentage (23.6%) was for people with household incomes less than $15,000.

Since it is important that care be coordinated, respondents were asked if they had one person they thought of as their personal doctor or health care provider. A positive reply was given by 78.2% of respondents. Women, White non-Hispanics, older people, people with more education, and people with higher household incomes were more likely to report a regular provider. Non-White or Hispanic respondents were least likely to report one regular provider (61.1%), while those age 65 years old and older were most likely (85.7%).

When asked how long it had been since their last regular check up, 69.4% said less than one year. An additional 13.2% said one to two years. On the other end, 1.2% said they had never had a checkup.

Comparison with Other States

Twelve states had an equal or lower percentage of residents without health insurance. Iowa had 12.7% of its non-elderly respondents reporting not having any insurance. The median for states and territories was 17%. These figures are nearly identical to those obtained in 2004 and 2005 for both Iowa and the nation.

Year 2010 Health Objectives for Iowa and the Nation

The *Healthy Iowans 2010* and *Healthy People 2010* goals for health insurance coverage are to see all people be covered by some form of health insurance. In Iowa, only 87.3% of the non-elderly have coverage. This is far short of the goal.

6. CARDIOVASCULAR DISEASES

Background

"Cardiovascular diseases" (CVD) refer in principle to any or all of the many disorders that can affect the circulatory system. CVD most often means coronary heart disease, heart failure, and stroke, taken together, which are the circulatory system disorders of greatest public health concern in the United States today. "Heart disease" most often refers to coronary heart disease, heart attack or to heart failure. "Stroke" refers to a sudden impairment of brain function, sometimes termed "brain attack," that results from interruption of circulation to one or another part of the brain. Heart disease and stroke are mainly consequences of atherosclerosis and high blood pressure (hypertension).

Since 1900, CVD has been the number one killer in the United States every year except 1918. Nearly 2,400 Americans die of CVD each day, an average of one death every 36 seconds. Mortality data show that CVD as the underlying cause of death accounted for 36.3 percent of all deaths in 2004, or one of every 2.8 deaths in the United States. According to the CDC/NCHS, if all forms of major CVD were eliminated, life expectancy would rise by almost seven years.[6] Heart disease and stroke are the most common cardiovascular diseases. They are the first and third leading causes of death for both men and women in the United States, accounting for nearly 40% of all annual deaths.[2]

Deaths are only part of the picture. More than 79 million Americans currently live with a cardiovascular disease. For example, coronary heart disease is a leading cause of premature, permanent disability in the U.S. workforce. Stroke alone accounts for disability in nearly one million Americans. More than 6 million hospitalizations each year are because of cardiovascular diseases.[2]

Each year about 700,000 people experience a new or recurrent stroke. On average, every 45 seconds someone in the United States has a stroke. Fifteen to 30 percent of stroke survivors are permanently disabled.[6] Stroke is a leading cause of serious, long-term disability in the United States.

The economic impact of cardiovascular diseases on our nation's health care system continues to grow as the population ages. The cost of heart disease and stroke in the United States is projected to be $431.8 billion in 2007, including health care expenditures and lost productivity from death and disability.[12]

In Iowa deaths from heart disease have steadily declined. The rate per 100,000 population has gone from 344.9 in 1991 to 250.3 in 2005. The rate of deaths from stroke has gone from 74.7 in 1991 to 64.0 in 2005. Deaths from cardiovascular diseases were 36.7% of all deaths in 2005 in Iowa. Diseases of the heart made up 73% and cerebrovascular disease 19% of the CVD deaths.[37]

Reducing cardiovascular disease risk requires an integrated strategy that includes:

1) Lifestyle behavior change -- weight management; increased physical activity; no tobacco use; a low-fat, low-cholesterol diet with moderate sodium, sugar and alcohol intake; and control of high blood cholesterol, elevated blood pressure, and diabetes.

2) Community environmental support such as population screening to identify individuals with high levels of blood cholesterol, blood pressure, blood glucose, and other individuals at risk for heart disease. Community support also includes interventions that teach the skills necessary for behavior change that make living a healthier life easier. One popular example is the establishment and upkeep of bicycle trails for use by the public.

3) Development of public policies that encourage healthy lifestyle behaviors such as smoke-free worksites. These may be implemented in the form of laws, regulations, standards, or guidelines that contribute to setting these and other social and environmental conditions. For example, dietary patterns result from the influences of food production policies, marketing practices, product availability, cost, convenience, knowledge, choices that affect health, and preferences that are often based on early-life habits.[6]

Cardiovascular Diseases Results

In 2006, 4.6% of adult Iowans had been told by a doctor that they had had a heart attack or myocardial infarction, 4.6% had been told they had angina or coronary heart disease, and 3.1% had been told they had a stroke. Although these percents may seem small, they represent around 90,000 Iowans with a heart attack or heart disease and 60,000 with a stroke.

Table 6.1 shows the distribution of these conditions by demographic groups. To get at all heart disease conditions, myocardial infarction and angina are combined when looking at the influence of various demographic factors.

Age is the variable with the most impact on having had these conditions. Only 1.4% of those age 18 to 24 years had heart disease conditions, while 24.6% of those 75 years or older had them. Nobody age 18 to 24 reported having a stroke, while 12.2% of those age 75 and older did so. Lower education and lower income also increase the prevalence of all conditions. Being male increased the prevalence of heart conditions, but not strokes. Hispanics reported the fewest having heart attack or stroke, but the most having angina or coronary heart disease.

These results may not exactly match the prevalence of these conditions since to participate in the survey the person had to survive them. Conditions ending in death on their first occurrence, therefore, would not be considered here.

There were three questions on the BRFSS asking about actions people were taking to lower their risk of heart disease or stroke. In response to these questions, 65% reported they were eating fewer high fat or cholesterol foods, 76.5% reported they were eating more fruit and vegetables, and 68.6% reported they were more physically active.

Table 6.1: Prevalence Among Iowans of Heart Attack, Heart Disease, and stroke, 2006

DEMOGRAPHIC GROUPS	Had Heart Attack		Had Angina or CHD		Had Stroke		Had any Heart Disease (1+2)	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	4.6	(4.1-5.2)	4.6	(4-5.2)	3.1	(2.5-3.7)	6.9	(6.1-7.6)
SEX								
Male	5.9	(4.9-6.9)	5.4	(4.2-6.6)	3.0	(2.2-3.8)	8.3	(7-9.6)
Female	3.5	(2.9-4.1)	3.8	(3.2-4.4)	3.1	(2.5-3.7)	5.5	(4.7-6.3)
RACE/ETHNICITY								
White/Non-Hisp	4.8	(4.2-5.4)	4.6	(4-5.2)	3.2	(2.6-3.8)	6.9	(6.2-7.6)
Black/Non-Hisp	2.0	(0-4.4)	3.0	(0-6.3)	1.6	(0-4)	5.0	(0.8-9.1)
Other/Non-Hisp.	4.1	(0.4-7.8)	1.8	(0-3.8)	2.6	(0-5.5)	5.1	(1-9.2)
Hispanic	1.8	(0-3.6)	6.3	(0-16.7)	0.2	(0-0.6)	7.4	(0-17.8)
AGE								
18-24	0.0	(0-0)	1.4	(0-4.1)	0.0	(0-0)	1.4	(0-4.1)
25-34	0.1	(0-0.3)	0.3	(0-0.7)	1.3	(0.1-2.5)	0.3	(0-0.7)
35-44	1.9	(0.7-3.1)	0.9	(0.1-1.7)	0.8	(0.2-1.4)	2.0	(0.9-3.2)
45-54	3.5	(2.3-4.7)	3.6	(2.4-4.8)	1.4	(0.6-2.2)	5.0	(3.6-6.5)
55-64	5.6	(3.8-7.4)	6.2	(4.4-8)	4.2	(2.6-5.8)	8.9	(6.9-10.9)
65-74	11.6	(9.1-14.2)	13.2	(10.5-15.8)	6.7	(4.5-8.8)	17.3	(14.3-20.3)
75+	17.8	(14.7-20.8)	14.9	(12.1-17.7)	12.2	(9.7-14.8)	24.6	(21.2-28)
EDUCATION								
Less Than H.S.	7.8	(5.1-10.5)	9.7	(4.8-14.6)	5.8	(3.4-8.2)	13.1	(8.1-18.1)
H.S. or G.E.D.	5.6	(4.6-6.6)	5.5	(4.5-6.5)	3.4	(2.6-4.2)	8.1	(6.9-9.3)
Some Post-H.S.	4.6	(3.4-5.8)	3.7	(2.7-4.7)	2.6	(1.6-3.6)	6.4	(5.1-7.7)
College Graduate	2.8	(2-3.6)	3.2	(2.4-4)	2.4	(1.6-3.2)	4.3	(3.4-5.3)
HOUSEHOLD INCOME								
Less than $15,000	11.8	(8.3-15.3)	12.4	(6.9-17.9)	7.4	(4.7-10.1)	18.7	(12.9-24.4)
$15,000- 24,999	9.4	(7-11.8)	7.8	(5.8-9.8)	6.3	(4.1-8.5)	12.7	(10.1-15.3)
$25,000- 34,999	5.9	(3.9-7.9)	6	(4-8)	4.9	(2.7-7.1)	8.6	(6.3-10.9)
$35,000- 49,999	2.9	(1.7-4.1)	3.5	(2.3-4.7)	2.7	(1.5-3.9)	5.1	(3.6-6.5)
$50,000- 74,999	2.3	(1.3-3.3)	2.1	(1.3-2.9)	1.3	(0.7-1.9)	3.5	(2.3-4.6)
$75,000+	2.5	(1.5-3.5)	2.9	(1.9-3.9)	0.9	(0.3-1.5)	3.9	(2.7-5)

7. EXERCISE AND PHYSICAL ACTIVITY

Background

Physical activity is vital to good health and disease prevention. A lifestyle lacking in regular physical activity has been associated with an increased risk for cardiovascular illness, cancer, osteoporosis, and other debilitating conditions.[23,43,58] Despite its risks, a large proportion of people remain inactive.

Although the percentage who does not engage in regular physical activity remains high, many efforts are underway to try to increase the physical activity level of Iowans. Interventions to increase physical activity include:

1) An increased number of great recreational trails.
2) Increased regular media attention to physical activity including "FITNET" daily e-mail motivational messages.
3) Worksite wellness programs such as "Lighten-Up Iowa" – a team-based challenge approach.
4) Conferences and training on physical fitness.
5) Continuous promotion of physical activity by the Iowa Department of Public Health and other organizations through "Iowans Fit for Life"
6) The promotion by many organizations of events involving physical activity such as the Register's Annual Great Bicycle Ride across Iowa (RAGBRAI) sponsored by the Des Moines Register. The Hi-Vee triathlon, the Iowa Games, and many more.

Encouraging people to have a less sedentary lifestyle by engaging in regular physical activity continues to be a significant step toward a healthier Iowa.

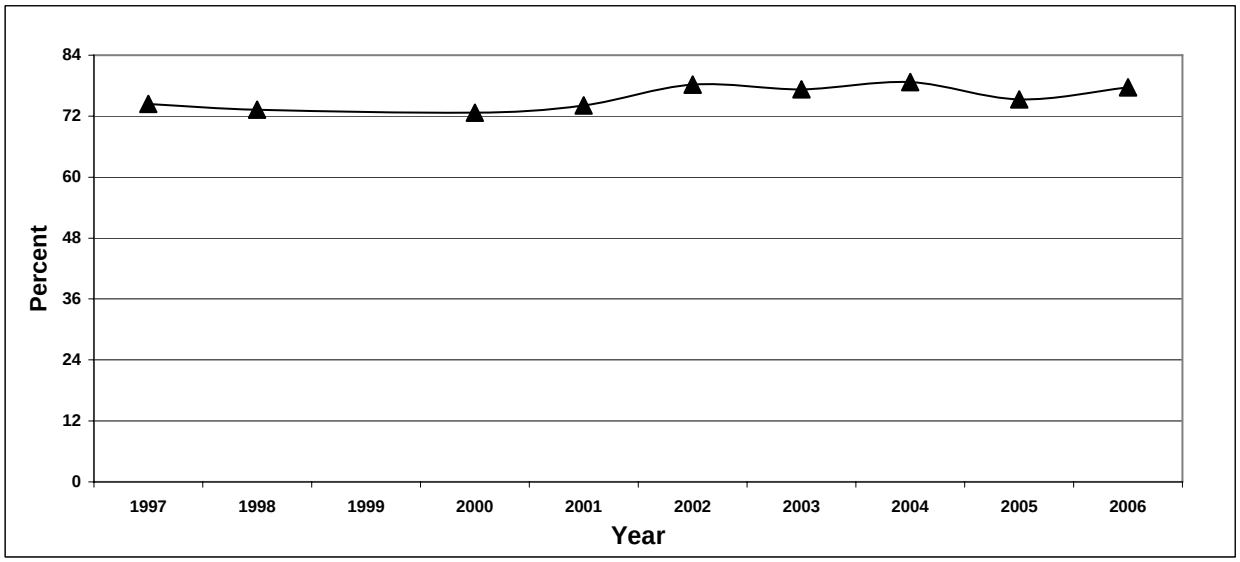
Exercise & Physical Activity Results

In 2006, 77.7% of respondents reported that they had engaged in some sort of physical activity for exercise during the past month other than their regular job. This is an increase from the 75.3% found in 2005, With the exception of 2005, the trend for the past five years has been about level (see figure 7.1).

A higher percentage of younger respondents reported engaging in leisure physical activity than older respondents. The percentage of respondents who exercised also increased with education and household income. This percentage was higher for White non-Hispanics than for other racial or ethnic groups and for males rather than females. The lowest percentage of all examined demographic groups was for those ages 75 and older (58.6%), while the highest was for those with an annual household income of $75,000 or more (88.9%) (see table 7.1).

A question was asked about how many hours a person spent watching television, playing video games, or at the computer for leisure activity. This question could gauge how sedentary the person's lifestyle was. The mean amount of time engaged in this activity was 2.7 hours per day. The median was two hours. Most people (29.3%) said they spent two hours a day. About 6.5% said they engaged in such activity never or less than daily, while 0.8% responded with more than twelve hours a day.

Figure 7.1: Trend in Physical Activity in Iowa by Year



Another question asked how often the respondent took a walk for exercise. Over a third (35.6%) said they walked every day or nearly every day. On the other hand, 16.4% said they never walked for exercise.

Comparison With Other States

Iowa ranked slightly better than the median on the measure of not engaging in leisure time physical activity. The median for the nation reporting not engaging in any leisure activity was 22.9%, while Iowa reported 22.3%. Values ranged from a low of 14.2% to a high of 31.1%. This excludes one region with such a greatly higher value that it can be considered unusually extreme.

Year 2010 Health Objectives for Iowa and the Nation

The target for objective 22.1, reducing the proportion of adults who engage in no leisure-time physical activity, is 20 percent.[63] Iowa's level of 22.3% is higher than this target.

Healthy Iowans 2010 had a goal that the BRFSS should be able to measure the prevalence of attaining the recommended level of moderate physical activity. This ability has existed for the past few years, although only in odd numbered years.

Table 7.1: Physical Activity in Iowans, 2006

Demographic Groups	Any Leisure Physical Exercise in Last Month	
	%	C.I. (95%)
TOTAL	77.7	(76.3-79.1)
SEX		
Male	79.4	(77.2-81.6)
Female	76.0	(74.2-77.8)
RACE/ETHNICITY		
White/Non-Hisp.	78.2	(76.8-79.6)
Non-White or Hisp.	72.2	(65.4-79)
AGE		
18-24	85.4	(79.9-90.9)
25-34	82.9	(79.8-86)
35-44	82.7	(80-85.4)
45-54	77.5	(74.8-80.2)
55-64	75.1	(72.2-78)
65-74	72.5	(69-76)
75+	58.6	(54.8-62.4)
EDUCATION		
Less than H.S.	61.6	(55.3-67.9)
H.S. or G.E.D.	70.2	(67.8-72.6)
Some Post-H.S.	80.3	(77.8-82.8)
College Graduate	87.8	(85.8-89.8)
HOUSEHOLD INCOME		
Less than $15,000	61.2	(55.3-67.1)
$15,000- 24,999	65.1	(60.6-69.6)
$25,000- 34,999	68.8	(64.1-73.5)
$35,000- 49,999	79.5	(76.6-82.4)
$50,000- 74,999	82.9	(80-85.8)
$75,000+	88.9	(86.7-91.1)

8. OVERWEIGHT AND OBESITY

Background

Overweight and obesity are probably the most serious health problems in America today. Obesity is a condition linked to risk factors for heart disease, cancer, and stroke, which are the first, second and third leading causes of death. It is associated with Type II diabetes, atherosclerosis (hardening of the arteries), gout, asthma, hypertension, and osteoarthritis.[65] Obesity has been increasing so rapidly that it may be regarded as an epidemic.[28]

Obesity is already a significant factor in rising health care costs. Increase in its prevalence is driving these costs even higher. Obesity costs the United States $117 billion each year.[36] Iowa's direct costs attributable to obesity were estimated from data from the late 1990s to be $783 million, of which $198 million is paid by Medicaid and $165 million, by Medicare.[27]

The origin of overweight involves many factors. It reflects inherited, environmental, cultural, and socioeconomic traits. The increase in the prevalence of being overweight is a result of a shift in energy balance in which energy taken in from food is greater than energy used in physical activity.[53]

Exact measurements of body fat require sophisticated equipment. To eliminate this problem obesity is often estimated from weight standards that are adjusted for body frame. Carefully measured weight and height remain the most easily performed and useful means to determine nutritional status and to predict mortality for the general population.[53]

Body mass index (BMI) is used to determine the appropriateness of weight for a person's height. BMI is defined as a person's body weight in kilograms divided by their height in meters squared [weight (kg)/height (m^2)]. Estimations of the prevalence of overweight and obesity in this report are based on BMI determined from self-reported weight and height. In adults, overweight is considered to be a BMI value greater than or equal to 25 and less than 30. Obesity is considered to be a BMI greater than or equal to 30.

Overweight & Obesity Results

The BRFSS data show that in 2006 37.2% of Iowans are overweight and 25.7% are obese, based on BMI. The combined percentage of individuals who are overweight or obese is 63%. This is higher than the 62.5% reported in 2005. This continues a long trend of increasing overweight and obesity (see figure 8.1).

The self-reported weights show many more males than females are overweight and obese, while the sex difference in prevalence of obesity is less. Overweight and obesity increase with age until late middle age after which a decline is seen. Obesity shows a very sharp decrease in the older age groups.

Figure 8.1: Overweight/Obese Iowans by Year Based on Body Mass Index (BMI), 1997-2006

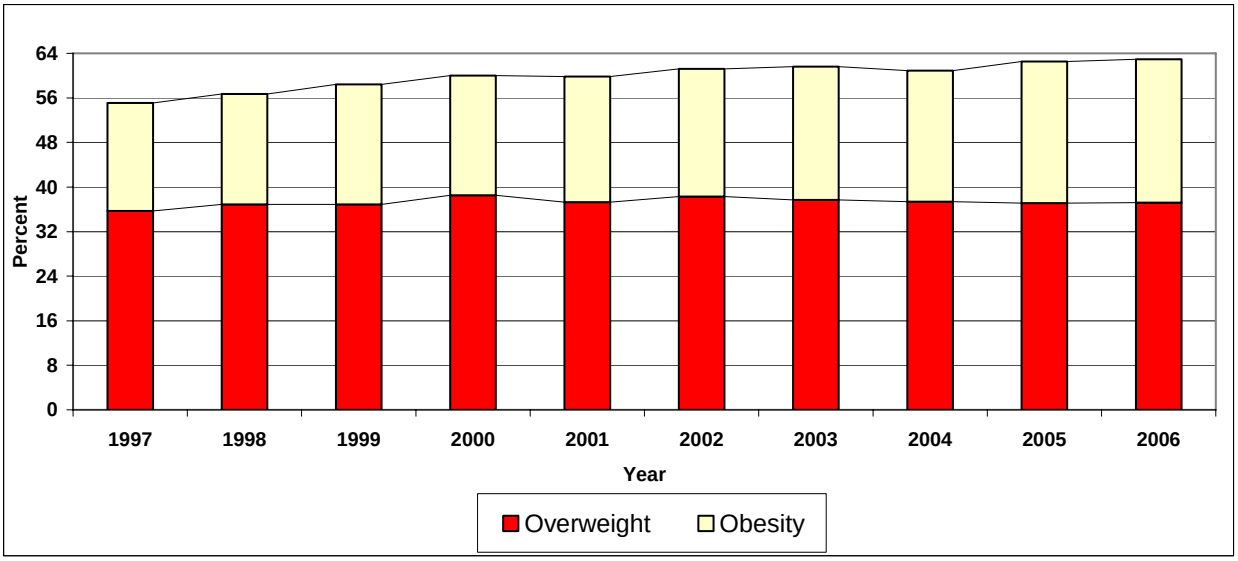
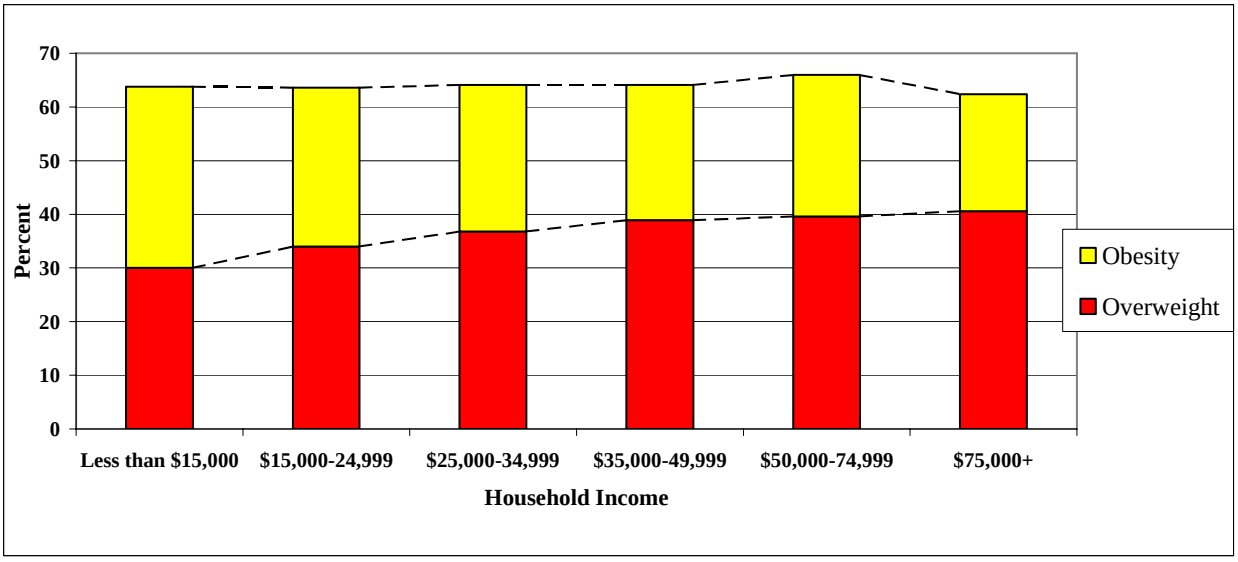


Figure 8.2: Overweight and Obesity by Income, Iowa 2006



The effects of income are opposite for overweight and obesity. The percentage overweight increases with increasing income. On the other hand, obesity tends to decrease with higher income levels. These effects somewhat cancel each other when overweight and obesity are combined (see table 8.1 and figure 8.2).

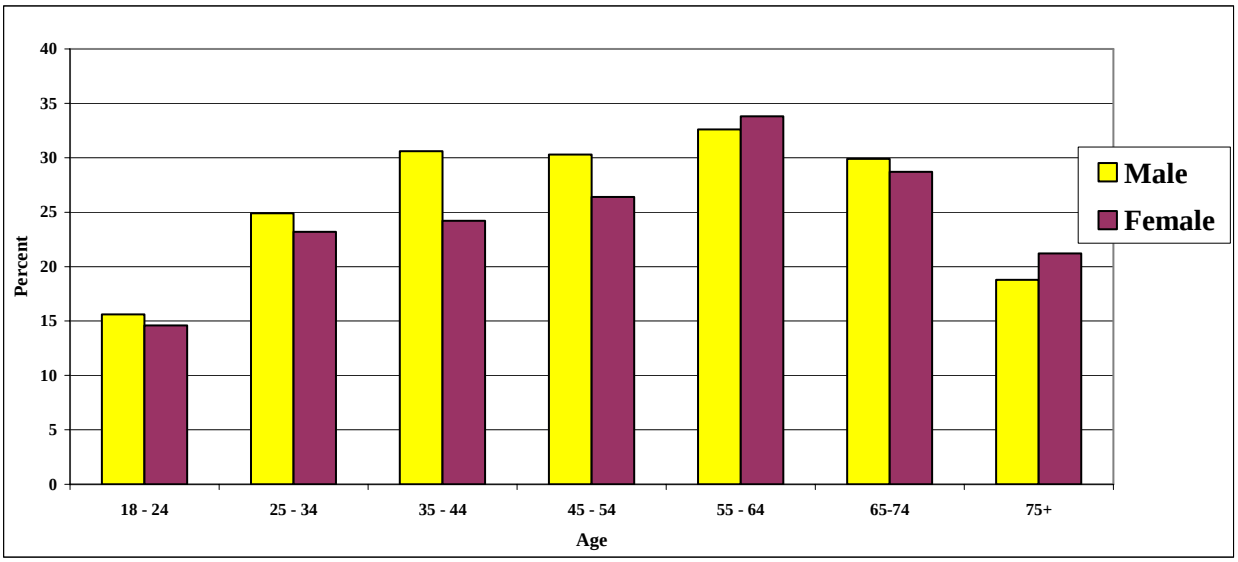
In terms of race and ethnicity, White non-Hispanics have a higher rate of both overweight and obesity than Non-White or Hispanics (see table 8.1).

Table 8.1: Overweight and Obese Iowans Based on BMI, 2006

DEMOGRAPHIC GROUPS	Overweight		Obesity		Combined	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	37.2	(35.6-38.8)	25.7	(24.3-27.1)	63.0	(61.2-64.8)
SEX						
Male	44.8	(42.3-47.3)	26.9	(24.5-29.3)	71.6	(69.1-74.1)
Female	29.7	(27.7-31.7)	24.5	(22.7-26.3)	54.2	(52-56.4)
RACE/ETHNICITY						
White/Non-Hisp	37.7	(36.1-39.3)	25.9	(24.3-27.5)	63.6	(61.8-65.4)
Non-White or Hisp.	29.8	(22.4-37.1)	23.6	(17.6-29.6)	53.4	(44.8-62)
AGE GROUP						
18 - 24	22.4	(16.3-28.5)	15.1	(9.6-20.6)	37.6	(30.2-45)
25 - 34	36.4	(32.1-40.7)	24.1	(20.2-28)	60.5	(56.2-64.8)
35 - 44	38.7	(35.2-42.2)	27.6	(24.3-30.9)	66.2	(62.9-69.5)
45 - 54	41.5	(38.2-44.8)	28.4	(25.3-31.5)	69.9	(67-72.8)
55 - 64	39.7	(36.2-43.2)	33.2	(29.9-36.5)	72.8	(69.7-75.9)
65-74	41.9	(37.9-45.9)	29.2	(25.5-32.9)	71.1	(67.5-74.8)
75+	39.8	(35.9-43.7)	20.3	(17.1-23.5)	60.1	(56.2-63.9)
EDUCATION						
Less than H.S.	30.0	(23.9-36.1)	28.2	19.3-28.6	58.2	(50.9-65.5)
H.S. or G.E.D.	39.2	(36.5-41.9)	25.6	24.2-28.9	64.9	(62-67.8)
Some Post-H.S.	35.5	(32.4-38.6)	27.1	21.8-26.9	62.6	(59.3-65.9)
College Graduate	38.6	(35.9-41.3)	23.9	16.6-21.4	62.5	(59.8-65.2)
HOUSEHOLD INCOME						
Less than $15,000	30.0	(24.5-35.5)	33.8	23.5-33.0	63.8	(57.1-70.5)
$15,000- 24,999	34.0	(29.7-38.3)	29.6	21.6-28.9	63.6	(58.7-68.5)
$25,000- 34,999	36.8	(32.3-41.3)	27.3	21.5-28.7	64.1	(59.2-69)
$35,000- 49,999	38.9	(35-42.8)	25.2	22.8-29.3	64.1	(60.2-68)
$50,000- 74,999	39.6	(35.9-43.3)	26.4	21.0-27.8	66.1	(62.2-70)
$75,000+	40.6	(37.1-44.1)	21.8	16.2-22.0	62.4	(58.9-65.9)

The demographic group with the highest prevalence of people over their healthy weight (combined overweight and obesity) is people age 55 to 64 years with 72.8%. The group with the lowest prevalence over their healthy weight is those 18 to 24 years old (37.6%). There is an interaction between sex and age with respect to obesity such that more men are obese than women in the age range from 35 to 54 years. The sexes are about the same in prevalence of obesity at the other ages (see figure 8.3. There is a much stronger sex difference for overweight than for obesity. More men are overweight than women at all ages.

Figure 8.3: Obesity in Iowa by Age and Sex, 2006



Comparison with Other States

Iowa's figure of 63% either overweight or obese in 2006 was higher than the median of 62.3%. The range of prevalence among the states and territories was from a low of 54.6% to a high of 67%. The prevalence of overweight and obesity increased from 2005 in both Iowa and the nation.

Year 2010 Health Objectives for Iowa and the Nation

The health objectives on weight for the nation to be achieved by the year 2010 call for increasing the prevalence of healthy weight (neither overweight nor obese) to 60% among adults age 20 years and older. In Iowa, more than 60% of the population is above healthy weight. The *Healthy People 2010* target for obesity is 15%. Iowa exceeds that by more than two thirds at 26.7% for those over age 20. The *Healthy Iowans 2010* goals for overweight and obesity are to halt the increasing prevalence. While there has been no increase in recent years for percent overweight, this goal has not been accomplished for obesity.

9. DIABETES

Background

Diabetes rates in the United States are approaching epidemic proportions. Almost 16 million people live with the burden of diabetes daily, and another 5.2 million may have the disease and do not know it. In 2001–2004, 10% of persons 20 years of age and over and more than one-fifth of adults 60 years and over had diabetes, including those with diabetes previously diagnosed by a physician and those with undiagnosed diabetes determined by results of a fasting blood sugar test.[49] From 1980 through 2005, the crude prevalence of diagnosed diabetes increased 120%.[22]

Skyrocketing costs accompany this epidemic with an estimated total annual cost (direct and indirect) of $132 billion. This includes direct medical costs of $92 billion and indirect costs of another $40 billion related to disability, work loss, and premature death.[48]

The good news is that research studies have found that positive lifestyle changes can prevent or delay the onset of Type II diabetes among high–risk adults. Lifestyle interventions included diet modification, weight loss and moderate-intensity physical activity (such as walking for 2 ½ hours each week).

The complications of diabetes are many and severe. They can include heart disease, stroke, high blood pressure, kidney disease, blindness, diseases of the nervous system, dental disease, complications of pregnancy, lower extremity amputations, biochemical imbalances such as ketoacidosis and diabetic coma, and lower resistance to other diseases. However, complications can be minimized when diabetes is diagnosed early and the patient is taught to self manage their disease through blood glucose control, weight control, taking medications appropriately, decreasing unhealthy lifestyles such as smoking, and implementing healthy lifestyle interventions as mentioned earlier.

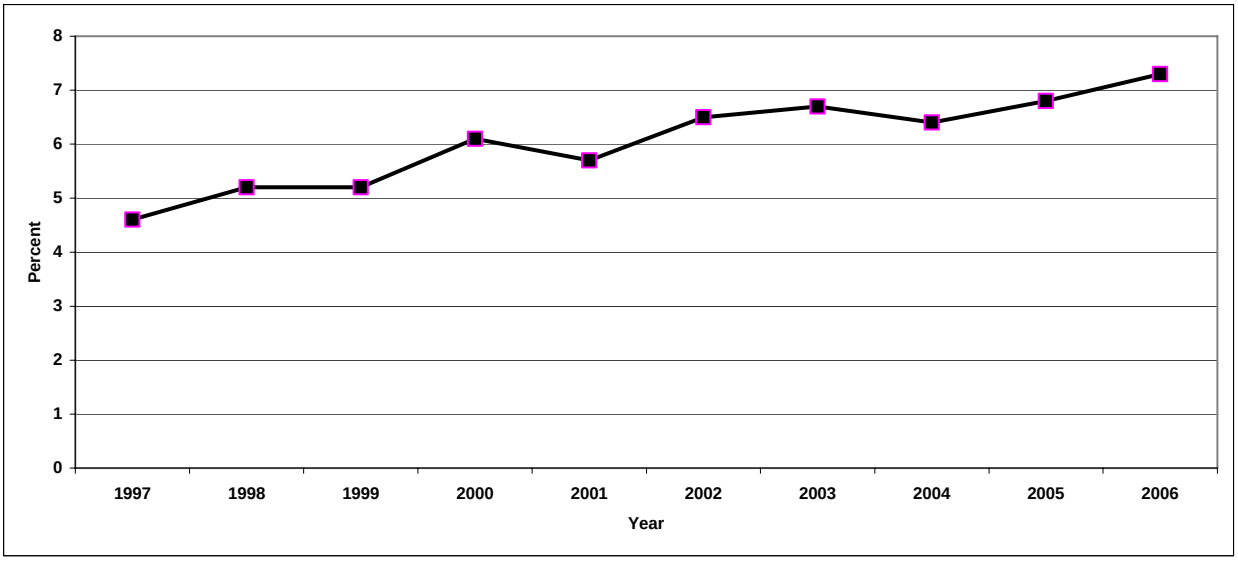
The Diabetes Prevention and Control Program at the Iowa Department of Public Health acts as a resource for health care professionals regarding the latest guidelines for diabetes care, coordinates a statewide diabetes network, and collaborates with local community projects to develop initiatives on public awareness, prevention, and other areas of disease management. It also certifies programs for Medicaid reimbursement and assists certified programs in maintaining quality standards for outpatient education.

Diabetes Results

In 2006, 7.3% of respondents had ever been told by a physician that they have diabetes, excluding women told only during pregnancy. This figure is higher than the 6.8% found in 2005. In fact, this is the highest percentage that has ever been reported for Iowa (see figure 9.1). Since 1997, there has been nearly a 60% increase in the rate of diabetes.

Table 9.1 shows that the rate of diabetes is much higher when respondents are male, older, lower in education, and have a lower household income. It is higher in African Americans, but lower in the other racial and ethnic minority groups considered. The demographic group with the

Figure 9.1: Percentage of Iowans Who Have Ever Been Told They Have Diabetes by Year, 1997-2006



highest percentage is people 75 years old or older (18.2%), while the group with the lowest percentage is people age 18 to 24 years (0.3%).

Among individuals who had been told they had diabetes, the highest percentage reported being first diagnosed at age 46 to 60 years old (37.9%). The age group in which the least reported being first diagnosed was less than age 16 years (2.7%).

Of those ever told by a physician that they have diabetes, 30.3% reported currently taking insulin. At the same time, 65.2% reported currently taking oral medication to control the disease.

When asked how many times they had seen a health professional for their diabetes in the last year, the most common answer was four (31.7%), while 9.1% said never.

Respondents told by a physician they had diabetes were asked how many times they had their blood sugar checked in the past 12 months. About 67.4% checked their blood sugar at least once a day themselves or with the help of a friend or family member. About 6.4% reported never testing their blood sugar. Around 83.1% had it checked at least once within the past year by a health professional through a glycosylated hemoglobin test, frequently referred to as an A1C. Around 10.8% reported not having had the A1C test. Another 6.1% reported they had never

Table 9.1: Iowans Ever Been Told They Had Diabetes, 2006

DEMOGRAPHIC GROUP	%	C.I. (95%)
TOTAL	7.3	(6.5-8.1)
SEX		
Male	7.8	(6.6-9)
Female	6.8	(5.8-7.8)
RACE/ETHNICITY		
White/Non-Hisp.	7.3	(6.5-8.1)
Black/Non-Hisp.	16.5	(6.7-26.3)
Other/Non-Hisp.	3.1	(0-6.3)
Hispanic	3.7	(0.6-6.8)
AGE GROUP		
18-24	0.3	(0-0.9)
25-34	1.6	(0.4-2.8)
35-44	2.7	(1.5-3.9)
45-54	6.3	(4.7-7.9)
55-64	13.5	(11.1-15.9)
65-74	16.7	(13.7-19.7)
75+	18.2	(15.1-21.3)
EDUCATION		
Less than H.S.	9.6	(6.7-12.5)
H.S. or G.E.D.	9.5	(8.1-10.9)
Some Post-H.S.	6.3	(4.9-7.7)
College Graduate	5.0	(4-6)
HOUSEHOLDINCOME		
Less than $15,000	14.5	(10.8-18.2)
$15,000- 24,999	11.9	(9.4-14.4)
$25,000- 34,999	9.3	(6.8-11.8)
$35,000- 49,999	6.2	(4.4-8)
$50,000- 74,999	4.4	(3.2-5.6)
$75,000+	3.8	(2.6-5)

heard of such a test. It is recommended that this test be done at least twice a year and at least three months apart.

Individuals with diabetes should check their feet daily for sores and irritations and should have them checked at least once a year by their health care provider. When asked how often they check their feet, 69.1% of respondents who were ever diagnosed with diabetes claimed to have checked them at least daily. Another 10.9% said they never checked them. Around 72.1% of respondents with feet reported they had their feet checked by a health professional at least once within the past 12 months.

Because persons with diabetes are at high risk of eye complications leading to blindness, regular eye examinations, including pupil dilation, are important. Respondents who reported ever having diabetes were asked when they had their last eye exam where their pupils were dilated. About 76.6% reported within the last year, while 1.8% reported never having such an examination.

Learning how to manage diabetes is very important to those who have the condition to keep it from leading to deteriorating health. Only 58.3% of those with diabetes in 2006 reported having taken a class on how to manage it.

Comparison with Other States

The median prevalence of diabetes for the states and territories was 7.5% in 2006. The figure for Iowa was below the median at 7.3%. Diabetes prevalence ranged from a low of 5.3% to a high of 12.1%. The prevalence of diabetes has risen in both the state and the nation.

Year 2010 Health Objectives for Iowa

The *Healthy Iowans 2010* objective set for prevalence of diabetes was for an increase of no more than 0.2% per year. This would make the desired prevalence in 2006 no higher than 7.3%. Iowa is currently at 7.3% which is right at the maximum goal.

10. ASTHMA

Background

Asthma is a disease of the lungs in which the airways become blocked or narrowed causing breathing difficulty. It is characterized by recurrent wheezing, breathlessness, coughing, and chest tightness.[52]

This chronic disease affects 20 million Americans.[1] Asthma is the most common chronic disease of childhood. At least five million children in the U.S. suffer from asthma. Prevalence among adults and children has increased sharply since 1980. [14,24] More than 200,000 Iowans now have asthma.[38]

Asthma is a leading cause of inpatient admission and of unscheduled emergency department and physician office visits. Many of these admissions and visits could be avoided if medical and self-management of asthma were carried out according to national guidelines.

The direct and indirect costs of asthma, including inpatient and outpatient care and medications, and socio-economic costs are estimated to exceed $12 billion each year.[8] Based on national data, it is estimated about 140,000 days of school are missed each year due to asthma by Iowa children,[3] and half of all children and a quarter of all adults with asthma miss at least one day of school or work each year.[60]

The causes of asthma are not completely understood, but are most likely a combination of personal and environmental risk factors. Those risk factors for asthma include family history of asthma and allergies, acute respiratory infections, exposure to indoor air pollution (tobacco smoke, animal dander, dust mites, cockroaches, occupational exposures to more than 250 substances), outdoor air pollution (burning leaves, pollen, air pollutants), obesity, and lack of exercise. Diet and early exposure to certain infectious agents may provide some protection. After developing asthma, a person often becomes especially sensitive to any exposures to the environmental risk factors listed.[50,51,52]

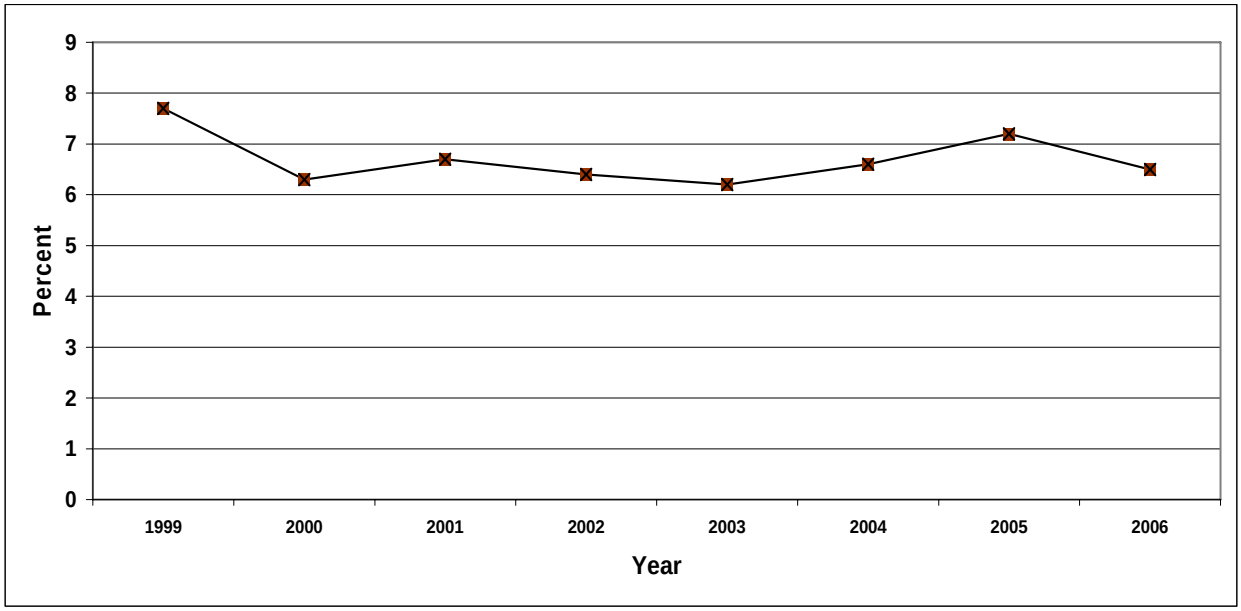
Asthma Results

In 2006, 9.6% of respondents reported ever being diagnosed by a physician with asthma. Out of all respondents in Iowa, 6.5% currently had asthma, and 3% formerly had asthma.[*] The percentage of Iowa adults with either current or former asthma is down from 2005. In that year the prevalence of current asthma was 7.2%. The figure for 2006 was quite similar to that for 2004. (see figure 10.1).

In Iowa, more women currently had asthma than did men (7.9% vs. 5%). People with lower education and members of racial/ethnic minorities also had higher rates of asthma. Household income seemed to be the most powerful factor determining asthma prevalence. The group with the highest percentage currently having asthma was found among people with household

[*] For some who had ever had asthma, their current status could not be determined.

Figure 10.1: Current Asthma in Iowa by Year, 1999 - 2006



incomes less than $15,000 (15.1%). The lowest percentage of current asthma was seen in people with household incomes between $25,000 and $35,000 per year (4%) (see table 10.1).

Even though an adult is interviewed in the BRFSS survey, two questions about asthma are asked for a randomly determined child in the household. It was reported that 9.1% of the children had ever been told they had asthma and that 6.5% of all children still have asthma. Contrary to the situation for adults, more boys were reported to currently have asthma than girls (7.6% vs. 5.5%).

Starting in 2006 the BRFSS collected a considerable amount of information from the people who reported they or their children had ever had asthma in a special callback survey. Data from that survey is not included in this report, but will be presented in a report of its own.

For more information about asthma in Iowa see the Web site http://www.idph.state.ia.us/hpcdp/asthma.asp.

Comparison with Other States

In 2006, only two states or territories had a lower prevalence of current asthma than Iowa, while only one had a lower rate of lifetime asthma. While Iowa reported 6.5% of the entire adult population currently suffering from asthma, the median for the nation was 8.5%. Prevalence ranged from a low of 4.5% to a high of 10.5%. Whether the ranking is a matter of a real lack of asthma or a matter of differential diagnosis, Iowa appears to be leading the nation in the battle against asthma.

Table 10.1: Iowans Currently and Formerly Having Asthma, 2006

DEMOGRAPHIC GROUPS	Current Asthma		Former Asthma	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	6.5	(5.7-7.3)	3.0	(2.4-3.6)
SEX				
Male	5.0	(3.8-6.2)	3.1	(2.1-4.1)
Female	7.9	(6.7-9.1)	2.9	(2.1-3.7)
RACE/ETHNICITY				
Non-Hispanic White	6.3	(5.5-7.1)	3.0	(2.4-3.6)
Non-Hispanic Black	11.4	(0-23)	0.9	(0-2.2)
Non-Hispanic Other	9.4	(4-14.8)	9.0	(0.7-17.2)
Hispanic	8.0	(0-18.5)	1.2	(0-3.4)
AGE				
18-24	7.6	(3.3-11.9)	4.4	(1.3-7.5)
25-34	5.4	(3.6-7.2)	3.7	(2.3-5.1)
35-44	5.5	(3.9-7.1)	2.9	(1.7-4.1)
45-54	7.4	(5.6-9.2)	3.2	(2-4.4)
55-64	5.9	(4.3-7.5)	2.6	(1.6-3.6)
65-74	9.5	(7.2-11.8)	2.2	(1-3.3)
75+	5.3	(3.6-7)	1.4	(0.6-2.2)
EDUCATION				
Less than H.S.	13.5	(8-19)	1.0	(0-2.2)
H.S. or G.E.D.	5.8	(4.6-7)	2.2	(1.4-3)
Some Post-H.S.	6.4	(4.8-8)	4.0	(2.6-5.4)
College Graduate	5.6	(4.2-7)	3.5	(2.3-4.7)
HOUSEHOLD INCOME				
Less than $15,000	15.1	(9.2-21)	2.3	(0.9-3.7)
$15,000- 24,999	8.8	(6.3-11.3)	5.0	(2.3-7.7)
$25,000- 34,999	4.0	(2.4-5.6)	3.2	(1.2-5.2)
$35,000- 49,999	5.4	(3.4-7.4)	2.3	(1.3-3.3)
$50,000- 74,999	6.0	(4.4-7.6)	2.9	(1.7-4.1)
$75,000+	4.8	(3.4-6.2)	3.6	(2.2-5)

11. TOBACCO USE

Background

Tobacco use remains the leading preventable cause of death in the United States. It is responsible for more than 440,000 deaths each year, or one in every five deaths.[2,3] Over $75 billion is spent every year on direct medical expenditures, and another $82 billion on indirect costs such as lost work time resulting from tobacco use.[13,25]

Tobacco use is known to cause heart disease, peripheral vascular disease, and chronic lung disease, as well as cancers of the lung, larynx, esophagus, pharynx, mouth, and bladder. In addition, cigarette smoking contributes to cancer of the pancreas, kidney, and cervix. In fact, smoking causes diseases in nearly every organ of the body.[25]

Consequences of smoking during pregnancy include spontaneous abortions, low birth weight babies, and sudden infant death syndrome (SIDS).[1]

Secondhand Smoke (SHS) increases the risk of heart disease and lung cancer in adults. SHS also affects children by increasing lower respiratory tract infections and asthma and by decreasing pulmonary function. According to the surgeon general there is no safe level of exposure to secondhand smoke.[59,64,66]

Public health efforts to reduce the prevalence of tobacco use began after the health risks were announced in the first surgeon general's report on tobacco in 1964. Smoking prevalence declined from 42.4% in 1965 to 24.7% in 1997.[13] After a leveling off in the 1990s, these rates have recently begun to further decline.

Iowa and 45 other states agreed to a master settlement with the tobacco industry on November 23, 1998. A portion of the settlement provided from this agreement is allocated to reducing tobacco use. Currently, funding for tobacco prevention and control programs in Iowa is almost 70% below the Centers for Disease Control and Prevention minimum recommended funding level for Iowa of $19.35 million.

The key settlement program components include reducing exposure to environmental tobacco smoke, smoking prevention education, the restriction of minors' access to tobacco, the treatment of nicotine addiction, and working toward changing social norms and environments that support tobacco use. The last component of the settlement involves counter-advertising and promotion, product regulation, and economic incentives against tobacco.[39]

Tobacco Use Results

Current smoking was defined as smoking at least 100 cigarettes in a lifetime and smoking some days or everyday during the past 30 days. Of all respondents surveyed in 2006, 21.4% reported being a current smoker. This was an increase from the 20.4% found in 2005. This reverses a downward trend in recent years (see Figure 11.1). Interestingly, it disagrees with findings from the Adult Tobacco Survey (ATS) which shows a continuation of the downward trend.

Figure 11.1: Trend in Percentage of Current Smokers in Iowa, 1997-2006

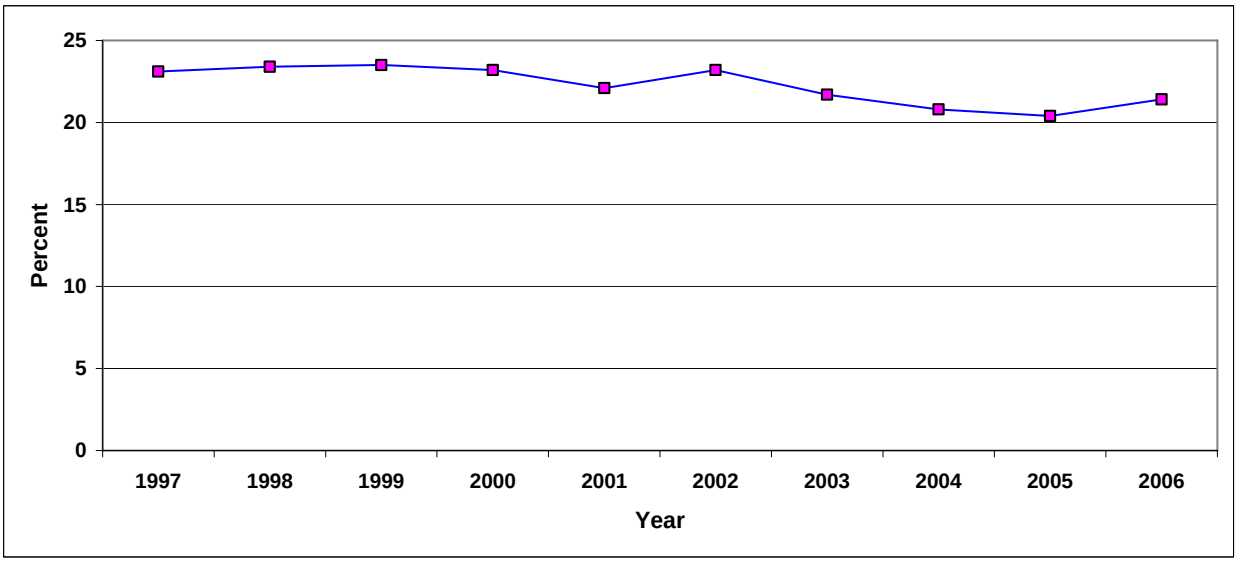
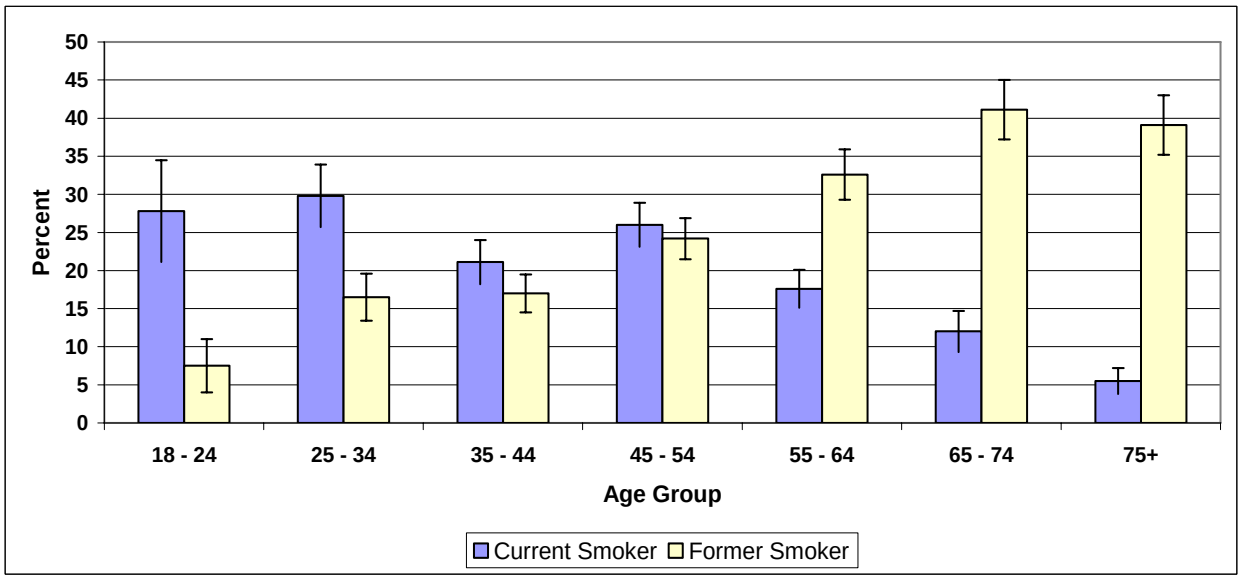


Figure 11.2: Percentage of Current and Former Smokers by Age, 2006



The proportion of current smokers was higher for males than for females. Smoking generally declined with increasing age, education, and income. People of minority race/ethnicity had a higher proportion of smokers. Respondents with less than $15,000 annual household income reported the highest proportion of current smokers (38.5%). Only 5.5% of respondents age 75 years and older were current smokers (see table 11.1).

Table 11.1: Percentage of Current and Former Smokers in Iowa, 2006

DEMOGRAPHIC	Current Smoker		Former Smoker	
GROUPS	%	C.I. (95%)	%	C.I. (95%)
TOTAL	21.4	(20-22.8)	23.7	(22.3-25.1)
SEX				
Male	23.1	(20.7-25.5)	27.8	(25.6-30)
Female	19.9	(18.1-21.7)	19.9	(18.3-21.5)
RACE/ETHNICITY				
White/Non-Hisp.	21.0	(19.6-22.4)	24.4	(23-25.8)
Non-White or Hisp.	28.4	(20.7-36)	14.2	(9.6-18.8)
AGE				
18-24	27.8	(21.1-34.5)	7.5	(4-11)
25-34	29.8	(25.7-33.9)	16.5	(13.4-19.6)
35-44	21.1	(18.2-24)	17.0	(14.5-19.5)
45-54	26.0	(23.1-28.9)	24.2	(21.5-26.9)
55-64	17.6	(15.1-20.1)	32.6	(29.3-35.9)
65-74	12.0	(9.3-14.7)	41.1	(37.2-45)
75+	5.5	(3.8-7.2)	39.1	(35.2-43)
EDUCATION				
Less than H.S.	38.1	(31.2-45)	21.7	(17-26.4)
H.S. or G.E.D.	26.2	(23.7-28.7)	25.1	(22.9-27.3)
Some Post-H.S.	22.6	(19.9-25.3)	23.2	(20.7-25.7)
College Graduate	10.6	(8.8-12.4)	23.2	(20.8-25.6)
HOUSEHOLD INCOME				
Less than $15,000	38.5	(31.8-45.2)	17.8	(13.7-21.9)
$15,000-24,999	27.5	(23.2-31.8)	28.3	(24.2-32.4)
$25,000-34,999	26.6	(22.3-30.9)	24.3	(20.6-28)
$35,000-49,999	24.5	(21-28)	24.7	(21.4-28)
$50,000-74,999	16.9	(13.8-20)	23.7	(20.8-26.6)
$75,000+	13.3	(10.8-15.8)	24.2	(21.3-27.1)

Nearly 23.7% of respondents were former smokers. This means that they had smoked at least 100 cigarettes in their lifetime, but did not smoke now. While more males were former smokers than females, the age trend for former smokers was the opposite of that for current smokers. The 18 to 24 age group had only 7.5% former smokers, while the 65 to 74 year age group had 41.1% (see figure 11.2).

When asked about attempts to quit smoking, 49.2% of Iowa's current smokers reported they quit smoking for a day or more during the past year. Younger smokers were more likely to report trying to quit during the past year. Individuals 18 to 34 years old reported trying to quit most often (53.4%), compared to 33% of persons age 65 years old and older who were least likely. Little could be said about many demographic groups since the small number of smokers in these groups led to a lack of confidence in the interpretation of the resulting figures.

Most Iowans (74.8%) said they had rules against smoking anywhere in their home. However, 16.6% said they allowed smoking anywhere in the house or had no rules concerning smoking in the house.

Among employed Iowans who worked indoors most of the time, 82% said no smoking was allowed in public areas at work, and 88.7% said no smoking was allowed in work areas. Employed Iowans were asked, "While at your job, how many hours a day can you smell the smoke from other people's cigarettes, cigars, and/or pipes?" Most (86.5%) reported zero hours. Of those remaining, almost half said one hour.

Table 11.2: Percentage of Current Smokers in Iowa Trying to Quit, 2006

DEMOGRAPHIC GROUPS	Tried to Quit Smoking	
	%	C.I. (95%)
TOTAL	49.2	(45.3-53)
SEX		
Male	48.6	(42.7-54.5)
Female	49.7	(44.8-54.6)
AGE GROUP		
18-34	53.4	(45.8-60.9)
35-44	52.3	(44.5-60.1)
45-54	47.2	(40.5-53.9)
55-64	44.0	(36-52)
65+	33.0	(24-42)

Comparison with Other States

In all the states and territories, smoking prevalence ranged from a low of 9% to a high of 28.5%. Iowa's current smoking prevalence of 21.4% was above the median of 20% for all reporting states and territories.

Year 2010 Health Objectives for Iowa and the Nation

The goal for *Healthy People 2010* is to reduce the percentage of smokers to 12%, while the goal for *Healthy Iowans 2010* is 18%. *Healthy Iowans 2010* also has a goal of reducing to 28% the proportion of smokers between the ages of 18 to 24 years and to 25% the proportion of smokers with a household income of less than $25,000. The prevalence of those reporting smoking is up in Iowa in 2006 to 21.4%. For ages 18 to 24 years, it is 27.8%. For household incomes less than $25,000, it is 31.3%. This does not achieve either the state or national overall goal or the state goal for income. It does achieve the state goal for ages 18 to 24 years.

Iowa fell far short of the revised *Healthy Iowans 2010* goal to have 75% of current smokers attempt to quit in the past year. At 49.2%, it still falls more than 25 percentage points short of the goal.

Healthy Iowans 2010 has a goal of no more than 10% of people exposed to secondhand smoke at work. This goal has not been met since indoor Iowa workers report that 18% do not have rules against smoking in public areas at work and 11.3% do not have rules against smoking in work areas. Furthermore, 13.5% said they could smell the smoke from other smokers for at least an hour while at work.

The *Healthy Iowans 2010* goal was 69% for people having rules against smoking in their home. This goal was surpassed with 74.8% saying they had such rules.

12. ALCOHOL CONSUMPTION

Background

A large number of people get into serious trouble because of their consumption of alcohol. Alcohol consumed on an occasional basis will pose little risk to most people and may even promote health. Even at this level, factors such as family history, health condition, and use of medications can pose problems. Furthermore, many people find it impossible to consume alcohol in a controlled manner.

Currently, nearly 14 million Americans abuse alcohol or are alcoholic. Several million more adults engage in risky drinking that could lead to alcohol problems. These patterns include binge drinking (drinking too much at one time) and heavy drinking (drinking a large quantity of alcohol on a regular basis). In addition, 53% of men and women in the United States report that one or more of their close relatives have a drinking problem.[56]

Alcohol dependency and abuse are major public health problems carrying a large economic cost and placing heavy demands on the health care system. Chronic alcohol use affects every organ and system of the body. It also can lead to medical disorders (e.g., fetal alcohol syndrome, liver disease, cardiomyopathy, and pancreatitis). Heavy drinking can increase the risk for certain cancers. Drinking increases the risk of death from automobile crashes as well as recreational and on-the-job injuries. Furthermore, both homicides and suicides are more likely to be committed by persons who have been drinking.

In purely economic terms, alcohol-related problems cost society approximately $185 billion per year. In human terms, the costs cannot be calculated.

Binge drinking is a serious problem. It has been a particularly serious problem on college campuses. Students who binge drink are more likely to damage property, have trouble with authorities, miss classes, have hangovers, and experience injuries than those who do not.

Among men, research indicates that greater alcohol use is related to greater sexual aggression. Binge drinkers appear to engage in more unplanned sexual activity and to abandon safe sex techniques more often than students who do not binge.[55]

Alcohol consumption has been considered to lead to 85,000 deaths (43.5% of all deaths) in the United States in 2000.[43]

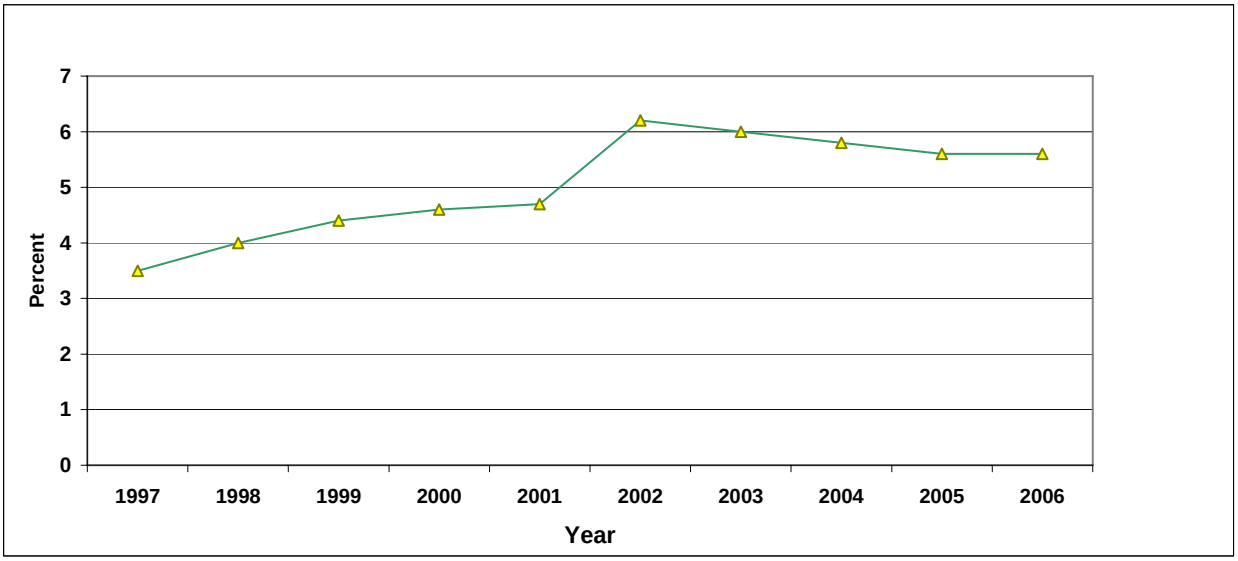
Alcohol Consumption Results

In the BRFSS survey, a standard drink is defined as one 12-ounce beer, one 4-ounce glass of wine, or a drink with one shot of hard liquor.

In 2006, 56.4% of Iowans reported that they had at least one drink of alcohol in the past 30 days. On the days when they drank, 37.2% had only one drink. The median was two drinks. About 14.1% reported drinking five or more drinks per day on the average.

In our analysis, heavy drinking was defined to be greater than two drinks per day for men and one drink per day for women. According to this definition, 5.6% of all respondents were heavy drinkers. This is the same prevalence found in 2005. The trend has been mildly downward in the percentage of heavy drinking over the last five years (See figure 12.1).

Figure 12.1: Trend of Heavy Drinking in Iowa, 1997-2006



In spite of the fact that men had to have a larger number of drinks to be considered heavy drinkers, 6.9% of men were considered to be heavy drinkers, while only 4.4% of women were considered to be heavy drinkers. The strongest determinant of heavy drinking was age. While 9.6% of those 18to 24 years old engaged in heavy drinking, only 0.6% of those 75 years old and older did. (see table 12.1).

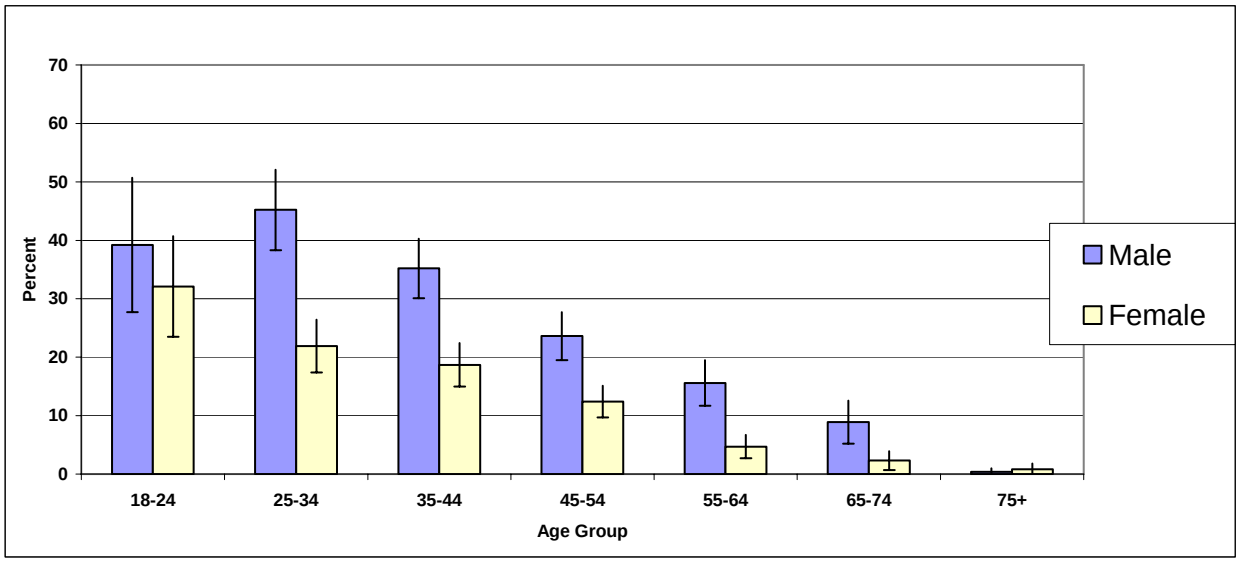
The definition of binge drinking changed for the BRFSS in 2006. A person is considered to binge if a man drinks more than five drinks or a woman drinks more than four drinks on one occasion. Previously the definition had been five drinks regardless of gender. Among all adult Iowans, 20.5% reported at least one binge episode in the last 30 days. No trend could be determined due to the change in definition. However, an attempt was made to compare excessive drinking to the 2005 binge rate by looking at the prevalence of those who reported having five or more maximum drinks on an occasion. In 2006, this figure was 17.1 % of the total adult population. This compares to the binge rate of 18.6% reported in 2005. These are somewhat different measures, but this maximum drinks measure is more comparable to the old binge measure than the new binge definition is.

Table 15.1: Binge and Heavy Drinking Among Iowans, 2005

DEMOGRAPHIC GROUPS	Binge Drinking		Heavy Drinking	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	20.5	(18.9-22.1)	5.6	(4.6-6.6)
SEX				
Male	27.6	(25.1-30.1)	6.9	(5.3-8.5)
Female	13.9	(12.3-15.5)	4.4	(3.4-5.4)
RACE/ETHNICITY				
White/Non-Hisp.	21.0	(19.4-22.6)	5.7	(4.9-6.5)
Black/Non-Hisp.	10.3	(1.8-18.8)	5.2	(0-11.7)
Other/Non-Hisp.	13.1	(3.8-22.3)	3.5	(0-9)
Hispanic	19.1	(6.8-31.4)	5.9	(0-16.5)
AGE				
18-24	35.8	(28.5-43.1)	9.6	(4.9-14.3)
25-34	33.8	(29.5-38.1)	8.1	(5.6-10.6)
35-44	26.9	(23.8-30)	5.7	(4.1-7.3)
45-54	17.9	(15.4-20.4)	5.9	(4.5-7.3)
55-64	10.1	(7.9-12.3)	4.6	(3.2-6)
65-74	5.3	(3.4-7.2)	2.0	(0.9-3)
75+	0.7	(0.1-1.3)	0.6	(0.1-1.1)
EDUCATION				
Less than H.S.	17.3	(10.8-23.8)	7.2	(1.9-12.5)
H.S. or G.E.D.	19.4	(17-21.8)	5.2	(4-6.4)
Some Post-H.S.	23.5	(20.4-26.6)	6.6	(4.6-8.6)
College Graduate	20.0	(17.5-22.5)	4.8	(3.4-6.2)
HOUSEHOLD INCOME				
Less than $15,000	15.7	(9.4-22)	7.2	(1.5-12.9)
$15,000- 24,999	17.0	(12.5-21.5)	3.2	(1.6-4.8)
$25,000- 34,999	18.7	(14.2-23.2)	6.6	(3.7-9.5)
$35,000- 49,999	22.8	(19.1-26.5)	6.3	(4.1-8.5)
$50,000- 74,999	25.2	(21.7-28.7)	5.8	(3.6-8)
$75,000+	24.3	(21.2-27.4)	6.3	(4.3-8.3)

Even with the lessened requirement on females from the new definition, males binge much more than females (27.6% versus 13.9%). In addition, the likelihood of binging decreases with age from 35.8% for 18 to 24 years old to only 0.7% for those 75 years old and older. The large sex difference is true at every age (see figure 12.2). Unlike most risky behaviors, respondents with higher education and those with a higher household income were somewhat more likely to binge drink. Racial minorities are also somewhat less likely to report binge drinking (see table 12.1).

Figure 12.2: Percentage of Iowans Who Binge by Age and Sex, 2006



Comparison with Other States

The percentage of people reporting heavy drinking in Iowa is above the median for the states and territories. Iowa's figure is 5.6% compared to the median of 5%. The percentage ranges from 2% to 7.9%.

For binge drinking, however, Iowa's figure of 20.5% is exceeded by only two states. The range is from a low of 8.5% to a high of 24.2% with a median of 15.3%. Six of the top seven binge drinking states are all in the upper Midwest.

Year 2010 Health Objectives for the Nation

The *Healthy People 2010* goal for the nation for binge drinking is only 6%. No state has achieved that goal. Iowa exceeds it by more than three times. Furthermore, the revised definition for binge drinking will make it even more difficult to achieve.

13. PROBLEM GAMBLING

Background

The purpose of the Iowa Gambling Treatment Program is to promote and protect the health of Iowans by reducing problem gambling behavior. Since 1988, the program has funded agencies statewide to provide services to assist problem gamblers and concerned others as well as educational services to inform Iowans about the risks of gambling.

Current Iowa Gambling Treatment Program services include:

- Counseling for persons affected directly or indirectly by problem gambling. The counseling services are provided through 10 treatment providers in 11 regions around the state.
- Evidence-based prevention and education services which aims to decrease the number of persons who are problem gamblers. These services provide information to Iowans about the potential risks associated with gambling and tips on responsible gambling.
- Information about problem gambling and provider referral through the 1-800-BETS OFF helpline.
- Transitional housing services for persons receiving problem gambling treatment and who have no other safe housing option
- Counselor training for clinicians providing problem gambling treatment and common co-occurring disorders.
- Evaluation of treatment services.

The Iowa Gambling Treatment Fund receives 0.5 percent of the gross lottery revenue and the adjusted gross receipts from the licensed casinos. This does not include the casinos operated by Native Americans. The Iowa Gambling Treatment Fund also receives any money or thing of value that has been obtained by, or is owed to a voluntarily excluded person by a casino licensee as a result of wagers made by the person after the person has been voluntarily excluded. The fund is capped at $6 million annually.

Gambling Results

Starting in 1997, three gambling questions were included in the BRFSS's state-added questions. The questions are:

- Have you gambled in the last 12 months?
- Has the money you spent gambling led to financial problems?
- Has the time you spent gambling led to problems in your family, work, or personal life?

In 2006, 31.9% of all respondents, including those who replied they did not know or refused to answer, reported they had gambled in the last 12 months. This is lower than the 33.7% figure found in 2005. It is the second lowest figure ever reported (see figure 13.1).

More men than women reported gambling in the past 12 months. Gambling tended to be more prevalent for people with higher income. People with a high school education or some college gambled more than those with more extreme levels of education. Fewer minority race or ethnic

groups reported gambling than did non-Hispanic Whites (see table 13.1). The highest percentage of gambling during the past year was reported for people age 25 to 34 years (37.5%). The lowest was reported for people age 75 or older (20.4%).

Table 16.1: Percentage of Iowans Who Report They Have Gambled in the Past 12 Months, 2005

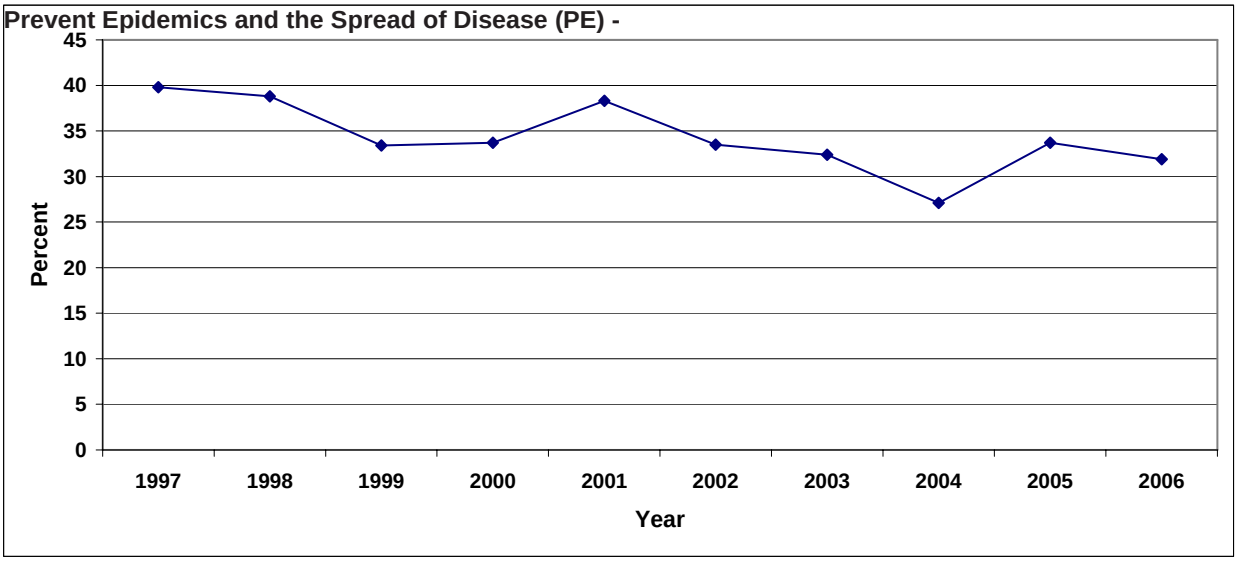
DEMOGRAPHIC GROUPS	Gambled	
	%	C.I. (95%)
TOTAL	31.9	(30.4-33.5)
SEX		
Male	36.8	(34.2-39.4)
Female	27.4	(25.5-29.3)
RACE/ETHNICITY		
Non-Hispanic White	32.7	(31.1-34.3)
Non-White or Hisp.	22.3	(15.7-28.9)
AGE		
18-24	28.6	(22-35.3)
25-34	37.5	(33.1-41.8)
35-44	32.4	(29.1-35.7)
45-54	31.3	(28.1-34.4)
55-64	33.6	(30.3-36.9)
65-74	35.8	(31.9-39.7)
75+	20.4	(17-23.7)
EDUCATION		
Less than H.S.	24.5	(18.7-30.4)
H.S. or G.E.D.	31.9	(29.2-34.5)
Some Post-H.S.	35.1	(31.9-38.2)
College Graduate	30.9	(28.2-33.6)
HOUSEHOLD INCOME		
Less than $15,000	24.5	(18.8-30.1)
$15,000- 24,999	26.0	(21.8-30.1)
$25,000- 34,999	32.3	(27.5-37.1)
$35,000- 49,999	33.3	(29.5-37.2)
$50,000- 74,999	34.0	(30.3-37.6)
$75,000+	37.4	(33.9-40.9)

In 2006, 98.9% of respondents who had gambled in the past 12 months said the money they spent gambling had not led to financial problems. Likewise, 99% reported the time spent gambling had not led to problems in family, work, or personal life.

Year 2010 Health Objectives for Iowa

The goals in *Healthy Iowans 2010* for problem gambling are that there should not be an increase in the number experiencing problems from gambling. The baseline figures here were that no more than 1.6% of gamblers should report financial problems and no more than 1.7% should report personal problems caused by their gambling. In 2006, Iowa respondents reported levels better than both goals.

Figure 13.1: Trend for Prevalence of Gambling in Iowa 1997-2006



14. WOMEN'S HEALTH

Breast Cancer Screening

Background

Breast cancer is a malignant (cancerous) tumor that starts from cells of the breast. The disease occurs mostly in women, but men can get breast cancer as well.

Other than skin cancer, breast cancer is the most common cancer among women. After lung cancer, it is the second leading cause of cancer death in women. About 178,480 women in the United States will be found to have invasive breast cancer in 2007. About 40,460 women will die from the disease this year. Currently, there are slightly over two million women living in the U.S. who have been treated for breast cancer.[3]

The chance of a woman having invasive breast cancer some time during her life is about 1 in 8. The chance of dying from breast cancer is about 1 in 33. Breast cancer death rates are going down. This decline is probably the result of earlier detection and improved treatment. In Iowa, 427 women died from breast cancer in 2005.[37]

The chance of getting breast cancer increases as a woman gets older. Nearly 8 out of 10 breast cancers are found in women over age 50.[1] Individual factors other than age that increase the risk for developing breast cancer include family history, a personal history of breast cancer, race, earlier abnormal breast biopsy, a long menstrual history, obesity after menopause, recent use of oral contraceptives, postmenopausal hormone therapy, never having children or having a first child after age 30, consuming one or more alcoholic beverages per day, and lack of exercise.[3]

Detecting breast cancer early is crucial to surviving the disease, and regular screening is crucial to detecting the disease early. There may be no detectable symptoms apart from screening until the disease is quite advanced.

Among the methods for early detection of breast cancer are clinical breast exam (CBE) and mammography. CBE is a clinical examination that involves a health care provider's physical examination of breast tissue. Mammography involves an x-ray examination of the breast and can detect abnormalities in the breast before they can be felt. Because the risk of developing breast cancer increases as women get older, mammography, with its increased sensitivity, is recommended for older women, while clinical breast exams should be part of the regular health routine for all adult women.

Due to increased survival rates for breast cancer when detected early, the National Cancer Institute recommends:

- Women age 40 years and older should be screened every one to two years with mammography.
- Women at higher than average risk of breast cancer should seek expert medical advice about whether they should begin screening before age 40 and the frequency of screening.[46]

Most cancer organizations also believe that women should have a clinical breast exam by a health care provider as part of regular, routine care.

Although there is some disagreement among professionals about exactly when screening should begin and how often it should be done, there is no doubt that screening for breast cancer saves lives.[33]

Breast Cancer Screening Results

In 2006, 91.3% of women surveyed reported ever having a clinical breast examination by a physician. The percentage increased with education and household income. It was most prevalent for women in the middle age groups, declining for those both younger and older. Also, non-Hispanic white women tend to have a higher percentage of having a CBE than non-white or Hispanic women (see table 14.1).

Table 14.1: Breast Examination Measures for Iowa Women, 2006

DEMOGRAPHIC GROUPS	Ever had a mammogram		Had mammogram in last 2 years		Ever had clinical breast exam	
	Age 40 and over					
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL FEMALES	91.2	(90-92.5)	77.5	(75.5-79.5)	91.3	(90-92.7)
RACE/ETHNICITY						
Non-Hisp. White	91.4	(90.1-92.7)	77.6	(75.6-79.6)	92.0	(90.6-93.4)
Non-White or Hisp.	87.4	(80.1-94.7)	75.8	(66.5-85)	81.2	(74.2-88.2)
AGE						
18 - 39					88.1	(85-91.1)
40 - 49	85.2	(82.1-88.4)	73.2		95.5	(93.7-97.4)
50 - 59	94.1	(92.1-96.1)	81.9	(78.5-85.3)	96.4	(94.9-97.9)
60 - 69	94.0	(91.6-96.4)	80.3	(76.3-84.3)	94.7	(92.5-96.9)
70 & up	92.8	(90.7-94.8)	75.6	(72.2-79.1)	86.6	(84-89.2)
EDUCATION						
Less than H.S.	84.3	(78.3-90.2)	58.8	(50.4-67.2)	80.0	64.1-79.9
H.S. or G.E.D.	88.9	(86.7-91.1)	75.5	(72.4-78.6)	86.9	87.6-92.1
Some Post-H.S.	91.9	(89.5-94.4)	77.1	(73.4-80.8)	93.7	92.1-95.7
College Graduate	95.8	(94.2-97.5)	86	(83.1-88.9)	96.8	94.5-97.5
HOUSEHOLD INCOME						
Less than $15,000	86.3	(81.3-91.4)	64.6	(57.5-71.7)	82.5	73.6-84.9
$15,000- 24,999	90.8	(87.3-94.3)	71.6	(66.5-76.7)	86.8	82.5-90.7
$25,000- 34,999	88.2	(83.8-92.6)	71.8	(65.3-78.3)	92.2	89.2-95.4
$35,000- 49,999	92.0	(89-94.9)	79.8	(75.1-84.5)	94.3	95.8-98.9
$50,000- 74,999	91.3	(88-94.6)	84.2	(79.9-88.5)	95.0	95.2-99.0
$75,000+	95.6	(93.3-97.9)	85.4	(81.5-89.3)	95.4	92.4-97.9

When asked if they had ever had a mammogram, 91.2% of all female Iowa respondents ages 40 and older reported having one. Women in the middle age groups were more likely to have a mammogram than those in younger and older groups. Also, women with higher education and income were more likely to have a mammogram (see table 14.1).

When asked if they had a mammogram in the past two years, 77.5% of all Iowa women over age 40 said they had. This is an increase from 75.5% in 2005 (see figure 14.1). The percentages for women in the middle age groups were higher than those for women in younger and older groups. In addition, the women with a higher education level and with a higher household income tended to have higher percentages of having a mammogram in the past two years (see table 14.1).

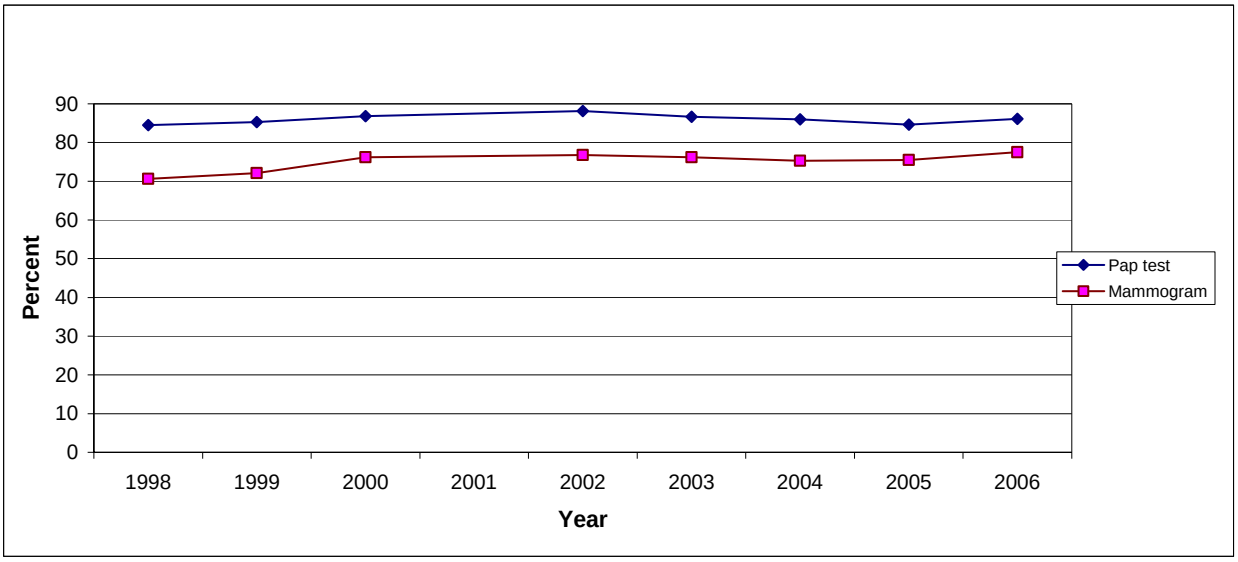
Comparison with Other States

In all states and territories, the percent of women age 40 and older who have had a mammogram in the past two years ranges from 61.3% to 84.8%. Iowa's figure of 77.5% is better than the median of 76.5%.

Year 2010 Health Objectives for Iowa and the Nation

The national health objectives for the year 2010 include an increase to at least 70% of women age 40 and older who have had a mammogram within the preceding two years. The *Healthy Iowans 2010* goal is 85%. Since 77.5% of Iowa women age 40 years old and older have had mammograms within the past two years, the goal has been met for the nation but not for Iowa.

Figure 14.1: Cancer Screening in Iowa Women by Year, 1998-2006



Cervical Cancer Screening

Background

Cancer of the cervix begins in the lining of the cervix, the lower part of the uterus (womb). This cancer does not form suddenly. First, some cells begin to change from normal to pre-cancer and then to cancer. This can take a number of years, although sometimes it happens more quickly. These changes may go away without any treatment. More often, they need to be treated to keep them from changing into true cancer. Cervical cancer is caused by infection with the human papiloma virus (HPV).

Approximately 11,150 new cases of invasive cervical cancer and 3,670 cervical cancer-related deaths were projected to occur in 2007 in the United States.[4] Rates in the United States have decreased to less than half their level in the early 1970s. Overall rates of US women diagnosed with invasive cervical cancer declined 17% just between 1998 and 2002,

The principal screening test for cervical cancer is the Papanicolaou (Pap) test. Early detection through Pap tests can dramatically lower the incidence of invasive disease and can nearly eliminate deaths from cervical cancer. Introduction of screening programs to populations naive to screening reduces cervical cancer rates by 60 to 90 percent within three years of implementation.[61] This reduction of mortality and morbidity with introduction of the Pap test is consistent and dramatic across populations.

The American Cancer Society recommends annual Pap tests begin about three years after a woman begins having sexual intercourse, but no later than age 21 years.[3] At the discretion of the woman's physician, less frequent exams may be necessary after three consecutive normal exams. More frequent tests are recommended if the immune system is weakened. Pap tests may not be necessary for women who have had a total hysterectomy.[3]

Cervical Cancer Screening Results

When asked if they ever had a Pap test, 95.4% of female respondents who had not had a hysterectomy reported having it. Reported rates for ever having a Pap test ranged from 80.4% for women from ages 18 to 24 years old to 99.5% for women between age 45 and 54 years. The proportion of women who ever had a Pap test also increased with level of education. These numbers were so nearly at the maximum of 100% that there was little room to show differences (see table 14.2).

In 2006, 86.1% of female respondents reported that they had their last Pap test within the last three years. This is an increase from 84.6% in 2005 (see figure 14.1). The percentage having a Pap test within three years increased with education and income. Women age 75 years and older had the lowest percentage (56.7%), while women who were age 25 to 34 years old had the highest percentage (95.3%) (see table 14.2).

Table 14.2: Proportion of Iowa Women Having Pap Test, 2006

DEMOGRAPHIC GROUPS	Ever had a Pap test		Had Pap test in last 3 years	
	%	C.I. (95%)	%	C.I. (95%)
FEMALES	95.4	(94.2-96.6)	86.1	(84.3-87.9)
RACE/ETHNICITY				
Non-Hisp. White	95.8	(94.6-97)	86.3	(84.5-88.1)
Non-White or Hisp.	89.7	(84-95.5)	84.0	(76.7-91.4)
AGE				
18-24	80.4	(72.8-88)	80.4	(72.8-88)
25-34	97.5	(95.9-99.1)	95.3	(93.1-97.5)
35-44	98.4	(97.2-99.6)	91.0	(88.3-93.7)
45-54	99.5	(98.9-100)	89.9	(87-92.8)
55-64	98.7	(97.5-99.9)	86.3	(82.4-90.2)
65-74	97.9	(96.4-99.4)	81.9	(76.5-87.3)
75+	91	(88.2-93.7)	56.7	(50.1-63.2)
EDUCATION				
Less than H.S.	84.2	(77.1-91.3)	63.8	(54-73.6)
H.S. or G.E.D.	94.3	(91.9-96.7)	79.6	(75.9-83.3)
Some Post-H.S.	97.2	(95.4-99)	89.6	(86.7-92.5)
College Graduate	97.7	(96.5-98.9)	93.9	(92.1-95.7)
HOUSEHOLD INCOME				
Less than $15,000	93.7	(90.4-97)	74.4	(67.5-81.3)
$15,000- 24,999	94.7	(91.8-97.6)	79.2	(73.9-84.5)
$25,000- 34,999	95.0	(92.5-97.5)	86.3	(81.8-90.8)
$35,000- 49,999	95.4	(92.3-98.5)	86.7	(82.2-91.2)
$50,000- 74,999	97.3	(94.4-100)	92.6	(88.7-96.5)
$75,000+	96.5	(94-99)	93.1	(89.8-96.4)

Comparison with Other States

In all states and territories the percent of adult women who have had a pap test in the past three years ranges from 72.3% to 89.4%. Iowa's figure of 86.1% is well above the median of 84%.

Year 2010 Health Objectives for Iowa and the Nation

The national health objectives for the year 2010 include an increase to at least 97% in the proportion of women over the age of 18 who have ever had a Pap test. The figure for 2006 of 95.4% is close to this goal but falls slightly short.

Both the national and Iowa health objectives for the year 2010 also include an increase to at least 90% in the proportion of women over the age of 18 who have had a Pap test in the last three years. The figure for 2006 of 86.1% is somewhat short of this goal. It is slightly closer than was

the case in 2005, when the figure was only 84.6%. The trend for both breast and cervical cancer screening in women may be seen in figure 14.1.

15. COLORECTAL CANCER SCREENING

Background

Colorectal cancer is cancer that occurs in the colon or rectum. Sometimes it is called colon cancer, for short. The colon is the large intestine or large bowel. The rectum is the passageway that connects the colon to the anus.

Colorectal cancer is the second leading cause of cancer-related deaths in the United States and in Iowa. There are estimated to be 153,760 new cases of colon and rectal cancer in the United States in 2007. There are estimated to be 52,180 deaths.[47] In 2005 In Iowa, 687 deaths occurred due to colorectal cancer.[37]

Although the exact causes of colorectal cancer are unknown, it appears to be caused by both inherited and lifestyle factors. Genetics may determine a person's susceptibility to the disease, while lifestyle factors, such as diets high in fat and low in fruits and vegetables, smoking, or sedentary lifestyle may determine which at-risk persons actually go on to develop colorectal cancer.[47] Risk factors include:

- **Age** – Approximately 93% of colorectal cancer cases occur in people age 50 and older, and the risk of developing the disease increases with age.
- **Family History** –Those who have family members diagnosed with colorectal cancer or polyps are at high risk for the disease.
- **Personal History** – Persons who have inflammatory bowel diseases are at increased risk.
- **Race** – African Americans are more likely than whites to be diagnosed at a more advanced disease stage and have lower survival rates.

Colorectal cancer usually develops from precancerous polyps in the colon and rectum. Screening tests can detect polyps so they can be removed before they turn into cancer.[15]

The American Cancer Society recommends that men and women at average risk begin regular screening for colorectal cancer at age 50 years. If everybody aged 50 or older had regular screening tests, as many as 60% of deaths from colorectal cancer could be prevented. Recommended options include the following:

- A fecal occult blood test (FOBT). An FOBT is a chemical test that detects blood that is not visible in a stool sample. If results are normal, repeat FOBT annually.

- Flexible Sigmoidoscopy. Flexible sigmoidoscopy uses a hollow, lighted tube to visually inspect the wall of the rectum and part of the colon. If results are normal, repeat flexible sigmoidoscopy every five years.

- Colonoscopy. This is a test that uses a hollow, lighted tube to inspect the interior walls of the rectum and the entire colon visually. If it is normal, the test should be repeated every 10 years.

- Double-contrast barium enema. This is a series of x-rays of the colon and rectum. If it is normal, the test should be repeated every five years.[5]

Colorectal Cancer Screening Results

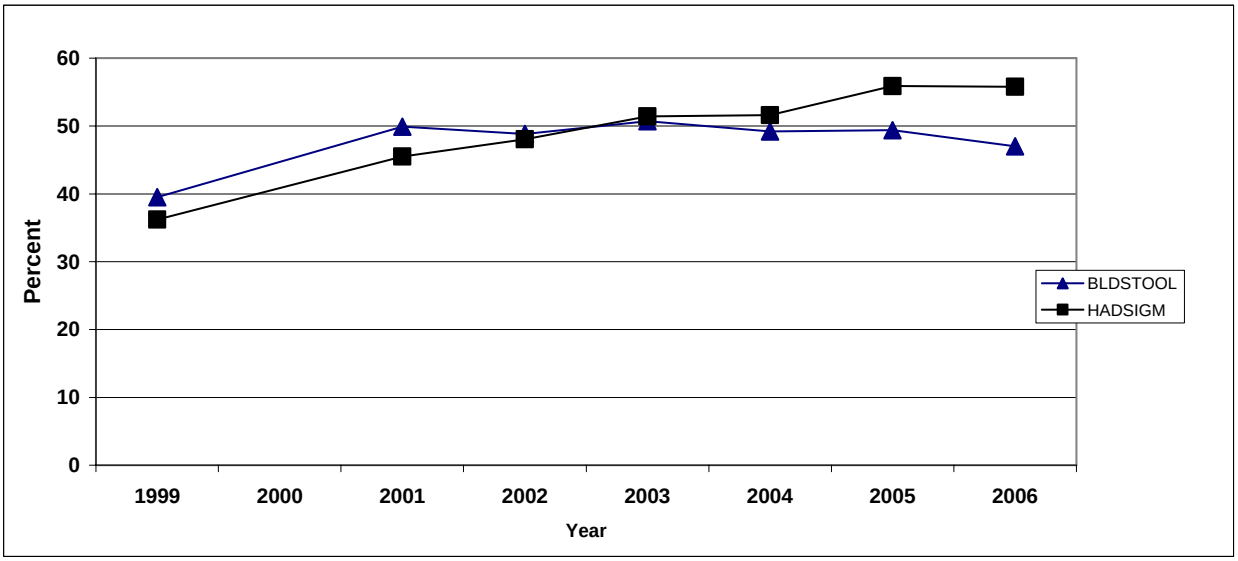
In 2006, 47% of Iowans 50 years old or older reported ever using a home blood-stool testing kit (FOBT). This is a decline from the 49.4% found in 2005 (see figure 15.1).

Females reported a higher percentage of use than males (49.1% versus 44.4%). People with a college education reported the highest prevalence of having the test (56.7%). Respondents with less than a high school education were least likely to use it (32.3%). Higher household income was also associated with more prevalent use of this test (see table 15.1).

Of all respondents 50 years old or older, 24.9% had used the blood stool test within the past two years. This was also a decline from 27.5% in 2005. This ranged from 19.1% among those with a household income less than $15,000 per year to 29.2% among college graduates (see table 15.1).

In 2006, 55.8% of Iowans 50 years old or older reported ever having a sigmoidoscopy or colonoscopy screening test. This was unchanged from the 55.9% found in 2005. This marks the leveling off of an upward trend seen over the last few years (see figure 15.1).

Figure 15.1: Ever Had Colorectal Cancer Screening Test by Year, 1999-2006



As was true with FOBT, education made the most difference in who was more likely to have the test. College graduates were most likely (63.4%), while those who had less than a high school education were least likely to have the test (43.6%). Unlike FOBT, there was no significant sex difference in prevalence of ever having a sigmoidoscopy or colonoscopy (see table 15.1).

Table 15.1: Proportion of Colorectal Cancer screening in Iowans 50 Years Old or Older, 2006

DEMOGRAPHIC GROUPS	Ever had blood stool test		Had Blood Stool Test in Past Two Year		Ever Had Sigmoidoscopy/ Colonoscopy		Had Sigmoidoscopy/ Colonoscopy in Past 5 Years	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	47.0	(45-49)	24.9	(23.1-26.7)	55.8	(53.8-57.8)	46.8	(44.8-48.8)
SEX								
Male	44.4	(41.3-47.5)	23.1	(20.4-25.8)	54.8	(51.7-57.9)	47.0	(43.8-50.2)
Female	49.1	(46.6-51.6)	26.4	(24.2-28.6)	56.6	(54.1-59.1)	46.6	(44.1-49.1)
EDUCATION								
Less than H.S.	32.3	(25.4-39.2)	20.0	(14.1-25.9)	43.6	(36.5-50.7)	36.8	(29.9-43.7)
H.S. or G.E.D.	44.1	(41-47.2)	24.1	(21.4-26.8)	54.4	(51.3-57.5)	46.4	(43.3-49.4)
Some Post-H.S.	46.2	(42.1-50.3)	23.4	(19.9-26.9)	54.0	(49.9-58.1)	44.2	(40.1-48.2)
College Graduate	56.7	(52.8-60.6)	29.2	(25.7-32.7)	63.4	(59.7-67.1)	53.0	(49.2-56.8)
HOUSEHOLD INCOME								
Less than $15,000	37.7	(31.4-44)	19.1	(14-24.2)	48.3	(41.6-55)	34.5	(28.3-40.7)
$15,000- 24,999	47.8	(42.9-52.7)	22.6	(18.5-26.7)	58.4	(53.5-63.3)	50.2	(45.3-55.1)
$25,000- 34,999	43.6	(38.1-49.1)	21.4	(16.9-25.9)	52.6	(46.9-58.3)	43.5	(37.9-49)
$35,000- 49,999	48.3	(43.2-53.4)	28.8	(24.1-33.5)	55.6	(50.5-60.7)	47.1	(42.2-52)
$50,000- 74,999	45.1	(40-50.2)	22.4	(18.3-26.5)	53.8	(48.7-58.9)	46.4	(41.4-51.3)
$75,000+	53.0	(47.9-58.1)	29.0	(24.3-33.7)	58.6	(53.5-63.7)	49.7	(44.7-54.8)

Of all respondents 50 years old or older, 46.8% had a sigmoidoscopy or colonoscopy within the past five years. This was also essentially unchanged from the 46.6% figure found in 2005.

Those with less education were less likely to have the test in the prescribed time. Those with very low income were also less likely to have the test, although the relationship was not clear for other income levels. The lowest percentage (34.5%) was found among those with annual household income less than $15,000, while the highest percentage (53%) was found among college graduates (see table 15.1).

Starting in 2004, a number of additional questions were included in the survey concerning colorectal cancer screening. A few findings from these are given here.

A health care professional was reported to have talked to a respondent 50 years old or older about colorectal screening in 53.7% of the cases. When the health care professional talked about screening, 76.2% recommended having a sigmoidoscopy or colonoscopy. Of the respondents who had a test recommended, 78.8% then had the test. Even more had a recommended test when the doctor recommended more than one, but the respondent did not have them all.

Out of all respondents 50 years old and older, 65.8% reported seeing any articles or advertising in the past six months about the risks of colorectal cancer. Television was the main medium of exposure to this advertising (44.7%).

Almost half of the respondents (45.3%) considered their own risk of colorectal cancer low. Only 3.8% considered it high.

Comparison with Other States

The proportion of people age 50 and older who have ever had a sigmoidoscopy or colonoscopy ranges from 49.6% to 68.6%. Iowa's prevalence of 55.8% is below the median of 57.7%.

16. DISABILITY AND INJURY CONTROL

Disability

Background

The World Health Organization's *International Classification of Impairments, Disabilities, and Handicaps*, defines disability as "any restriction (resulting from an impairment) of ability to perform an activity in the manner or within the range considered normal for a human being." Impairment is defined as "any loss or abnormality of psychological, physiological, or anatomical structure or function."[35]

Chronic physical, mental, and emotional conditions can limit the ability of adults to carry out important activities such as working and doing everyday household chores. With advancing age, an increasing percentage of adults experience limitation of activity.[49]

The latest Census estimates for 2005 found that 36.9 million people 16 years old and older had a disability that prevented or limited their ability in some way.[62]

Arthritis and other musculoskeletal conditions are the most frequently reported cause of activity limitation among both working-age and older adults However, people can experience a wide range of types and severity of impairments.

Many disabled Americans use Assistive Technology Devices (ATDs) to accommodate mobility impairments and other sensory and mental impairments These can allow a person with a disability to work and otherwise live an independent life.

Disability Results

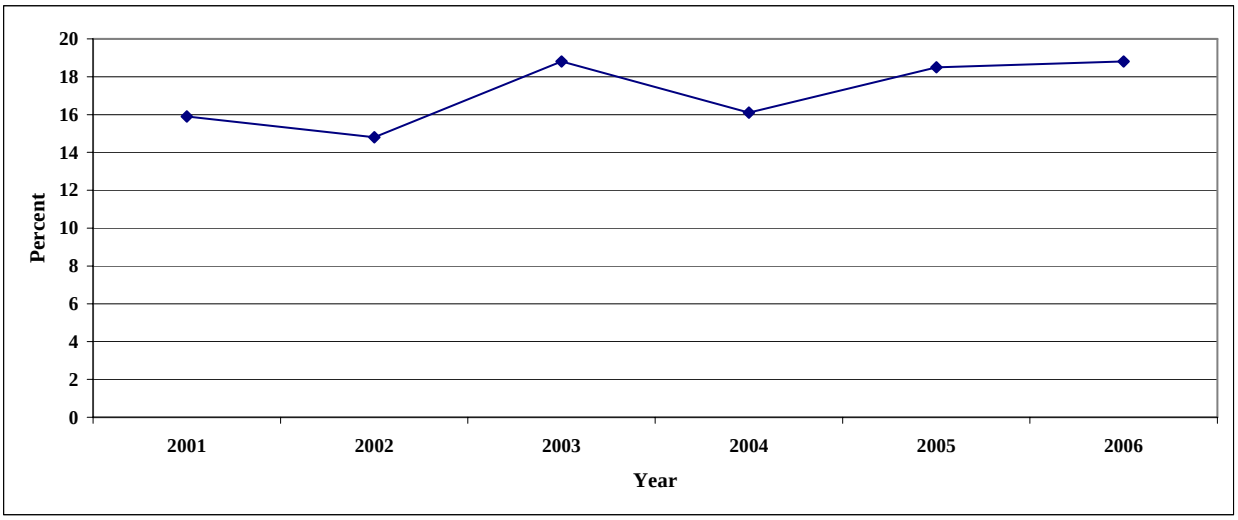
In 2006, 16.9% of Iowans responded "yes" to being limited in any way in activities due to an impairment or health problem. This is exactly the same as the figure reported in 2005.

When asked whether they had a health problem requiring the use of special equipment, 6.7% of adult Iowans said they needed such items as a cane, a wheelchair, a special bed, or a special telephone. This is up from 5.9% in 2005.

Whether someone is considered to have a disability in this analysis is based on a positive response to either of these two questions. In 2006, 18.8% of respondents were considered to have a disability. This is slightly higher than the 18.5% found in 2005 (see figure 16.1). It appears that while there are about the same proportion of people with limitations, more people are using special equipment.

As shown in Table 16.1, older people, people with less education, and people with lower household incomes reported higher percentages of disability. Non-Whites or Hispanics reported a lower percentage of disability than White non-Hispanics. Of the five demographic variables analyzed, people age 18 to 24 years reported the lowest percentage (7.5%). Those with household incomes less than $15,000 reported 46.1% disability, which was the highest amount.

Figure 16.1: Disability Trend by Year, 2001 – 2006



The second highest reporting group was those age 75 and over (40.7%). This group is the most rapidly growing group in the population.

Comparison with Other States

The percent of people reporting being disabled in all states and territories ranged from 11.4% to 29.5% with a median of 21.5%. Iowa ranked better than the median in people affected by disability at 18.8%. Only six states or territories were better than this figure.

Injury Control

Background

The 2006 BRFSS examines three areas related to injury control. These are falls, seatbelt use, and drinking and driving.

Falls

Unintentional falls are the leading cause of injury deaths and serious injuries among the fastest growing segment of the U.S. population, older adults. In the United States, one of every three people age 65 years and older falls each year. More than 90 percent of hip fractures occur as a result of falls, with most of these fractures occurring in persons over 70 years of age. Falls were the leading cause of external injury, accounting for 24 percent of emergency department visits.[9]

Elderly persons who survive a fall experience significant morbidity. Hospital stays are almost twice as long in elderly patients who are hospitalized after a fall than in elderly patients who are admitted for another reason. Compared with elderly persons who do not fall, those who fall experience greater functional decline in activities of daily living (ADLs) and in physical and social activities, and they are at greater risk for subsequent institutionalization.[2]

In 2003, 18,044 persons died as the result of falls, 11.0 percent of all injury deaths. Two thirds of these deaths occurred in people age 75 years and older.[32] In Iowa in 2005, the figure was 314 with 256 being among those 75 years of age or older.[37] The number of people age 65 years and older is projected to double in the next 50 years. . For people age 85 years and older, relative growth rates are even faster.

Table 16.1
Percent Reporting Being Disabled, 2006

Demographic Groups	Limitation	
	%	C.I. (95%)
TOTAL	18.5	(17.3-19.7)
SEX		
Male	17.7	(15.8-19.6)
Female	19.2	(17.7-20.7)
RACE/ETHNICITY		
White/Non-Hisp	18.7	(17.5-19.9)
Black/Non-Hisp	20.4	(9.6-31.1)
Other/Non-Hisp.	21.9	(10.9-32.8)
Hispanic	10.7	(5-16.4)
AGE		
18-24	7.6	(3.8-11.4)
25-34	11.1	(8.5-13.8)
35-44	11.6	(9.1-14.2)
45-54	18.6	(15.9-21.2)
55-64	25.4	(22.3-28.5)
65-74	24.8	(21.2-28.3)
75+	42.3	(38.2-46.4)
EDUCATION		
Less than H.S.	28.2	(22.7-33.8)
H.S. or G.E.D.	21.1	(19-23.3)
Some Post-H.S.	17.9	(15.6-20.2)
College Grad.	12.7	(11-14.5)
HOUSEHOLD INCOME		
<$15,000	45.5	(39.5-51.6)
$15,000- 24,999	28.0	(24.3-31.8)
$25,000- 34,999	19.1	(15.5-22.6)
$35,000- 49,999	15.8	(13-18.6)
$50,000- 74,999	11.9	(9.6-14.2)
$75,000+	8.3	(6.4-10.1)

One of the strongest predictors of a fall is having sustained a previous fall.[32,2] A fall is often a marker of increasing fragility, functional decline, or neurological impairment, and may indicate the need for a secondary prevention strategy (e.g., hip protectors to prevent hip fractures.)

Falls Results

The BRFSS defines a fall as when a person unintentionally comes to rest on the ground or another lower level. Respondents age 45 years and older were asked if they had experienced a fall in the last three months. About 15% said they had. Of those who had fallen, 27.7% said that it injured them. In this instance, injury was defined as limiting activity for at least a day to see a doctor.

Seatbelt Use

Motor vehicle crashes remain the ninth leading cause of death in the United States. More than 43,000 people die from motor vehicle-related injuries each year; four million more require emergency department visits. Traffic crashes account for more than $150 billion in total costs each year.[9]

An important and easy way to lower the risk of death or disability from a motor vehicle accident is to wear a seatbelt. In the United States during 2005, safety belts saved the lives of an estimated 15,632 people over 4 years of age. More than half the people killed in motor vehicle crashes in 2005 were not wearing safety belts.[54]

Seatbelt Use results

In 2006, when respondents were asked how often they wore a seatbelt when driving or riding in a car, 93% said always or nearly always. This was more common among females than males (96.6% vs. 89.2%).

Drinking and driving

Alcohol-related motor vehicle crashes kill someone every 31 minutes and nonfatally injure someone every two minutes. During 2005, 16,885 people in the U.S. died in alcohol-related motor vehicle crashes, representing 39% of all traffic-related deaths[45] This includes drivers, adult and child passengers, inhabitants of other vehicles, pedestrians, and pedal cyclists. Each year, alcohol-related crashes in the United States cost about $51 billion.[19]

Drinking and driving Results

In 2006, 8.1% of respondents reported that within the past 30 days they had driven when they had too much to drink at least once. More men than women had reported doing this (11.3% vs. 4.4%). A larger percentage of younger people also reported driving under the influence. The range was 17% for those age 18 to 24 years to only 1.7% for those age 65 and older.

Comparison with Other States

In all states and territories the range of people reporting at least one fall in the last month ranged from 11.6% to 20.5% with a median of 15.8%. At 15%, Iowa was better than the median.

In terms of seatbelt use, The percent reporting their use always or nearly always ranged from 97.9% to 79% with a median of 91.6%. Iowa was also better than the median here with 93%.

Drinking and driving at least once in the past month was reported from only 2.2% to 40.6% in all states and territories. The high figure was an extreme outlier since the second highest percent was only 8.5%. With 8.1%, Iowa was the state ranked highest for people driving under the influence. The two higher ranked regions were territories.

17. IMMUNIZATION

Background

Influenza is a potentially life-threatening, contagious disease that is caused by a virus. When influenza attacks the lungs, the lining of the respiratory tract is damaged. The tissues temporarily become swollen and inflamed, but usually heal within two or more weeks.[7]

Influenza and pneumonia combined are the seventh leading cause of death among all Americans and the fifth leading cause of death among all Americans over the age of 65. Influenza and pneumonia together resulted in 64,847 deaths in 2003 in the U.S.[32] and 893 in Iowa in 2005.[37]

In 2004 influenza and pneumonia represented a cost of $37.5 billion to the U.S. economy, $5.6 billion due to indirect costs and $31.9 billion in direct costs.[7]

For healthy children and adults, influenza is typically a moderately severe illness. For unhealthy or elderly people, influenza can be very dangerous. Adults 65 years old and older who contract influenza are much more likely to have serious complications from this illness, which can affect their health and independence.

Influenza can be prevented with the influenza vaccine. This vaccine is produced each year so that it can be effective against influenza viruses that are expected to cause illness that year. A yearly influenza vaccination has been reported to be between 67% and 92% effective in preventing influenza and reducing its severity. The vaccine may be taken by a shot or by nasal spray. The nasal spray is not recommended for people at high risk, however. The best time to receive the influenza vaccine is soon after the vaccine becomes available in the fall of each year.[20]

Influenza is a very serious illness for anyone at high risk. Certain diseases that place people at high risk for influenza include:

- Chronic lung disease such as asthma, emphysema, chronic bronchitis, tuberculosis, or cystic fibrosis,
- Heart disease,
- Chronic kidney disease,
- Diabetes or other chronic metabolic disorder,
- Severe anemia, or
- Diseases or treatments that depress immunity.

Some of the symptoms associated with influenza are fever, chills, coughing, weakness, loss of appetite, bodily aches and pains, sore throat, or dry cough.

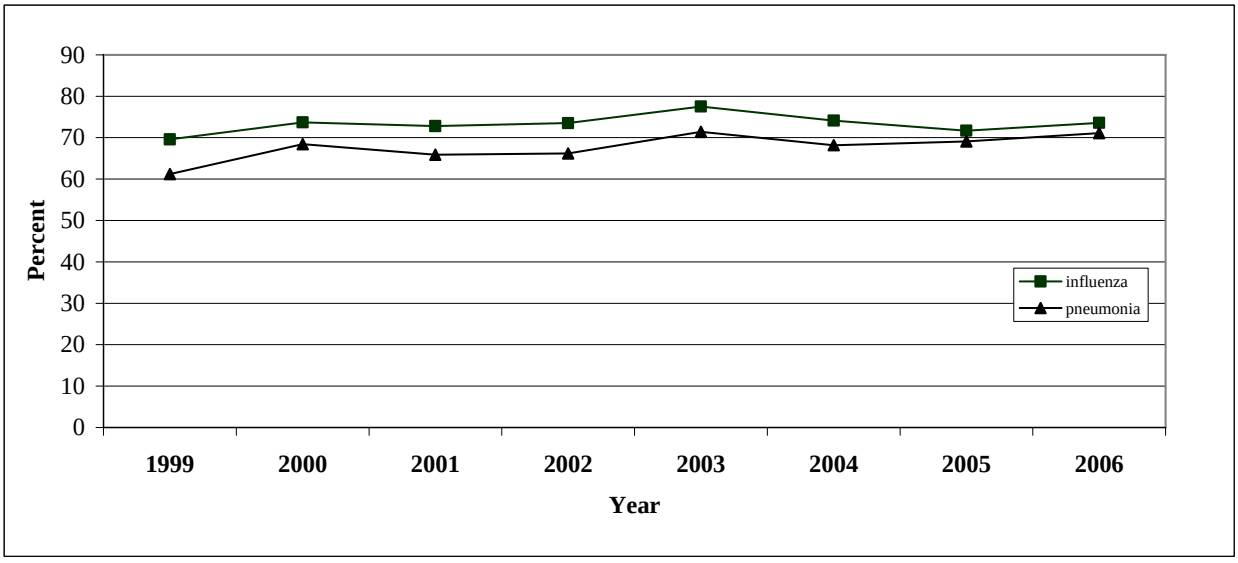
In the United States, the estimated annual incidence of bacterial pneumonia among persons 65 years old and older is 50 to 83 cases per 100,000 persons,[21] and such infections are associated with a high death rate. The Advisory Committee on Immunization Practices (ACIP) recommends that persons aged 65 years old or older receive at least one lifetime dose of pneumococcal vaccine[21] and annual influenza vaccination.[20]

Hepatitis B vaccination is the most effective measure to prevent hepatitis B virus (HBV) infection and its consequences, including cirrhosis of the liver, liver cancer, liver failure, and death. In adults, ongoing HBV transmission occurs primarily among unvaccinated persons with behavioral risks for HBV transmission (e.g., heterosexuals with multiple sex partners, injection-drug users [IDUs], and men who have sex with men [MSM]) and among household contacts and sex partners of persons with chronic HBV infection.[11]

Immunization Results

In 2006, 73.6% of Iowans age 65 and over reported having a flu shot in the past 12 months. This is higher than the 71.7% found in 2005 and is almost as high as the level from 2004. There was a fairly steady upward trend until 2003. Then the prevalence of immunization fell off, but now appears to be recovering (see figure 17.1). This may possibly be due to the negative effect of the shortage of flu vaccine in the 2004-2005 season.

Figure 17.1: Immunizations in Iowans Age 65 and Over, 1999 – 2006



Among all adults, 38.6% had a flu immunization in the past 12 months. This was either in the form of a flu shot or a FluMist™ nasal spray. Females, older people, Whites non-Hispanics, and people with a higher education were more likely to have a flu immunization. The lowest percentage was found among people between age 18 and 24 years (16%), while the highest was for those age 75 and older (78%) (see table 17.1).

In 2006, 71.1% of Iowans age 65 and over reported ever having a pneumonia vaccination. This is higher than the 69.1% found in 2005. This is the second highest rate for pneumonia vaccination seen in recent years (see figure 17.1).

Among all adults, 24.5% had ever received a pneumonia vaccination. Older people, females, people with lower education, and people with lower income, were more likely to have pneumonia vaccinations. Non-White or Hispanics were less likely to have a pneumonia vaccination. Age made the greatest difference in whether someone had a pneumonia vaccination. The lowest percentage of pneumonia vaccination occurred

Table 17.1: Percentage of influenza and Pneumonia Immunizations in Adult Iowans, 2006

DEMOGRAPHIC GROUPS	Influenza		Pneumonia	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	38.6	(37.1-40.2)	24.5	(23.1-25.9)
SEX				
Male	32.9	(30.6-35.2)	22.8	(20.8-24.8)
Female	44.0	(42-46)	26.0	(24.2-27.8)
RACE/ETHNICITY				
White/Non-Hispanic	39.6	(38-41.2)	24.8	(23.4-26.2)
Non-White or Hispanic	25.3	(19.6-31)	19.2	(13.7-24.7)
AGE GROUP				
18-24	16.0	(10.8-21.2)	10.8	(6.1-15.5)
25-34	23.8	(20.2-27.4)	9.0	(6.5-11.5)
35-44	26.8	(23.8-29.8)	7.3	(5.5-9.1)
45-54	33.4	(30.3-36.5)	13.1	(10.7-15.5)
55-64	52.0	(48.5-55.5)	26.6	(23.5-29.7)
65-74	67.9	(64.2-71.7)	65.0	(61.1-68.8)
75+	78.0	(74.7-81.2)	76.6	(73.2-80.1)
EDUCATION				
Less than H.S.	31.5	(26-37.1)	31.5	(25.6-37.4)
H.S. or G.E.D.	39.3	(36.7-41.9)	29.9	(27.5-32.3)
Some Post-H.S.	35.5	(32.5-38.5)	21.6	(19.1-24.1)
College Graduate	42.6	(39.8-45.4)	19.2	(17-21.4)
HOUSEHOLD INCOME				
Less than $15,000	42.3	(36.1-48.4)	37.3	(31.4-43.2)
$15,000- 24,999	41.0	(36.6-45.4)	42.3	(37.8-46.8)
$25,000- 34,999	40.2	(35.6-44.8)	28.9	(24.8-33)
$35,000- 49,999	36.5	(32.9-40.2)	22.1	(19.2-25)
$50,000- 74,999	31.9	(28.5-35.2)	12.7	(10.3-15.1)
$75,000+	39.8	(36.3-43.2)	15.6	(13.2-18)

among those who were 35 to 44 years old (7.3%), while those 75 years old and older were highest by far (76.6%) (see table 17.1).

Those who had ever been told they had diabetes or asthma were more likely to receive their flu and pneumonia vaccinations than those who had not been told they had these conditions. Of all respondents ever told they had diabetes, 64.4% had a flu vaccination and 59.3% had a pneumonia vaccination. The figures for those not told they had diabetes were 36.5% and 21.5% respectively.

Table 17.2
Percent Reporting Immunization for Hepatitis B, 2006

Demographic Groups	Immunizations	
	%	C.I. (95%)
TOTAL	36.7	(34.9-38.5)
SEX		
Male	32.9	(30-35.8)
Female	40.2	(38-42.4)
RACE/ETHNICITY		
White/Non-Hisp	36.5	(34.7-38.3)
Non-white or Hisp.	38.2	(30.1-46.4)
AGE		
18-24	67.6	(59.8-75.4)
25-34	50.5	(45.6-55.4)
35-44	41.4	(37.7-45.1)
45-54	32.5	(29.2-35.8)
55-64	26.8	(23.5-30.1)
65-74	16.4	(13.3-19.5)
75+	7.8	(5.5-10.1)
EDUCATION		
Less than H.S.	24.6	(17.5-31.7)
H.S. or G.E.D.	27.0	(24.1-29.9)
Some Post-H.S.	41.6	(38.1-45.1)
College Grad.	46.2	(43.1-49.3)
HOUSEHOLD INCOME		
<$15,000	31.3	(24.8-37.8)
$15,000- 24,999	31.9	(27-36.8)
$25,000- 34,999	32.4	(27.3-37.5)
$35,000- 49,999	36.0	(31.9-40.1)
$50,000- 74,999	40.8	(36.7-44.9)
$75,000+	44.3	(40.4-48.2)

Of all those ever told they had asthma, 41.9% had their flu vaccination, while 34.2% had a pneumonia vaccination. For those never told they had asthma, the figures were 38.3% and 23.5% respectively.

Starting in 2006, a question was asked about immunization for hepatitis B. Full vaccination for hepatitis B was reported by 36.7% of adult Iowans. Younger people, people with higher income and education, and females more frequently reported receiving hepatitis B immunization (see table 17.2). Age made the largest difference with 67.6% of people
age 18 to 24 years reporting being immunized, while only 7.8% of those age 75 years or older reported this.

Comparison with Other States

The median percentage of the population age 65 and over who have had a flu shot in the past 12 months from all the states and territories was 69.1% in 2006. Iowa ranked sixth highest in the proportion age 65 and over who had a flu shot (73.6%). The range was from 75.9% to 33.1%.

The median percentage of the population age 65 years old and older who ever had a pneumonia vaccination was 66.8%. Here, Iowa ranked the same as it did with influenza vaccination. Iowa ranked sixth highest of all reporting states and territories (71.1%). The range was from 74.7% to 29.5%.

Iowa ranked lower than the median, however, when it came to the proportion of all adults who had been immunized for Hepatitis B. The median was 37.5%, while Iowa's rate was 36.7%.

Year 2010 Health Objectives for Iowa and the Nation

The *Healthy Iowans 2010* and *Healthy People 2010* goals for both having a flu shot in the past 12 months and ever having a pneumonia vaccination for people age 65 and over are 90%. Iowa's 2006 figures of 73.6% for having a flu shot and 71.1% for ever having a pneumonia vaccination, although among the highest in the nation, have a long way to go to meet these targets.

18. HIV/AIDS

Background

HIV stands for human immunodeficiency virus. This is the virus that causes AIDS. HIV is different from most other viruses because it attacks the immune system. The immune system gives our bodies the ability to fight infections. HIV finds and destroys a type of white blood cell that the immune system must have to fight disease. *AIDS* stands for acquired immunodeficiency syndrome. AIDS is the final stage of HIV infection. It can take years for a person infected with HIV, even without treatment, to reach this stage. Having AIDS means that the virus has weakened the immune system to the point at which the body has a difficult time fighting infections.[17]

The HIV epidemic has now been with us for more than twenty-five years.[26] Estimates suggest that about one million people in the United States are living with HIV or AIDS. About one quarter of these people do not know that they are infected: not knowing puts them and others at risk. At least 40,000 new infections occur each year in the United States.[29]

HIV infection, the precursor to AIDS, was the sixth leading cause of death among people 25 to 44 years old in 2002. It accounted for 5.7% of deaths from all causes in this age group in the United States. AIDS accounted for 174.7 years of potential life lost before the age of 75 years per 100,000 population in the United States in 2000. This was 2.3% of all years of potential life lost.[18]

While "men who have sex with men" remains the largest exposure group, many of the new diagnoses are occurring among African Americans, Hispanics, women, and people infected heterosexually. These data must be used to ensure targeted prevention efforts to reach those in greatest need, with a primary focus on young African American and Hispanic men and women at risk through sexual and drug-related behaviors.

In Iowa, Black non-Hispanic people constitute only 2% of the population, but account for 17% of all Iowans living with HIV/AIDS. The Hispanic population in Iowa is 4%, but Hispanics account for 12% of all Iowans living with HIV/AIDS. Nearly 80% of HIV cases are among men.[40]

The number of persons living with HIV/AIDS continues to increase. In 2005 there were more new HIV cases diagnosed in Iowa than in any other year since records have been kept. Approximately 1,342 persons in Iowa were living with HIV/AIDS on December 31, 2005.[40]

In light of recent advances in HIV diagnostics and therapeutics, the lifetime costs of health care associated with HIV have grown from $55,000 to $155,000 or more per person. These figures represent the amount of money saved by preventing just one case of HIV.[31]

It is important that people who may be at risk of catching HIV be tested. This can prevent them from unknowingly spreading the disease and permit early treatment before the disease advances to AIDS.

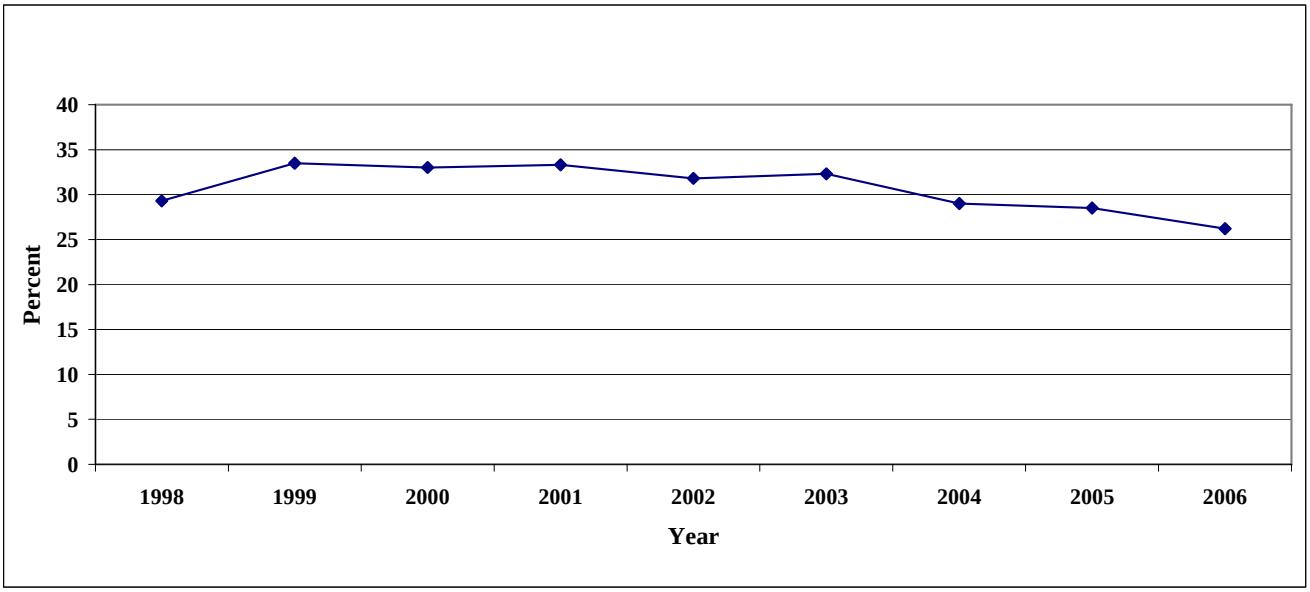
HIV/AIDS Results

AIDS questions were only asked of people between the ages of 18 and 64 years.

Only 26.2% of respondents reported ever being tested for HIV, not including as part of a blood donation. This is lower than the 2005 finding of 28.5% and is the lowest figure ever reported. The trend in having an HIV test has been downward for the past several years (see figure 18.1).

The largest proportion of respondents tested was among those age 25 to 34 years (43.2%). The smallest proportion reporting ever being tested was 8.8% of those between ages 55 to 64 years old (see table 18.1). In addition, females, minorities, and people of lower income were more likely to be tested.

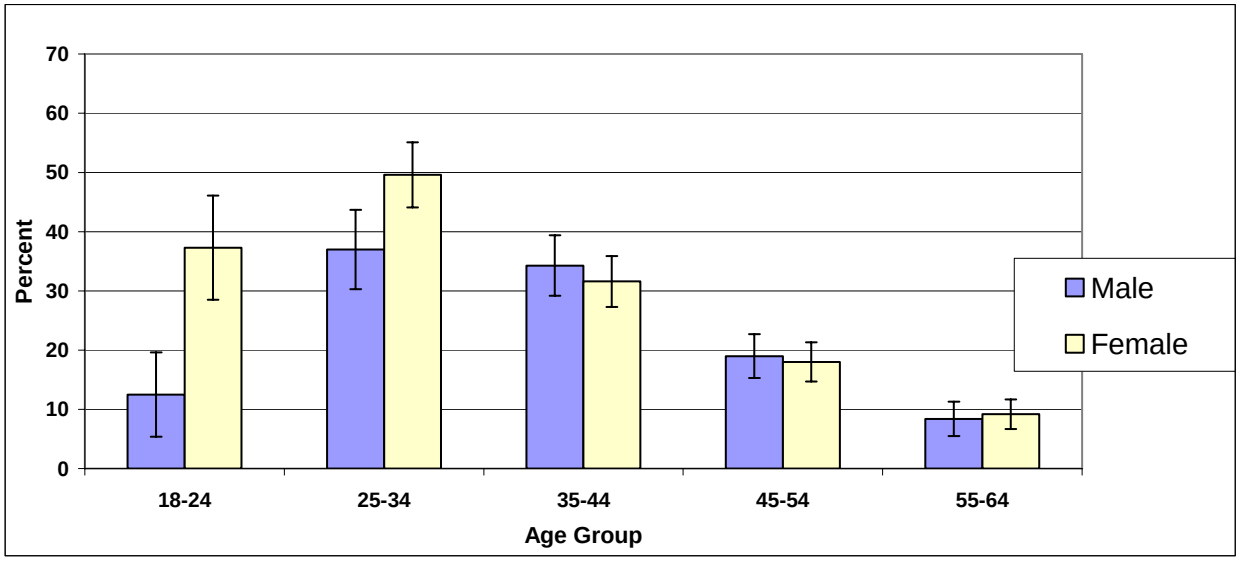
Figure 18.1: Percentage of Iowans Reporting Ever Being Tested for HIV 1998-2006



There is an interesting interaction between sex and age, however. Figure 18.2 shows that in the younger age groups, many more women have been tested, while there is little difference in the older age groups.

Each of the respondents who had received an HIV test was asked to describe where the test occurred. Respondents gave a variety of answers. The most commonly reported places were private doctor (or HMO office (31.6%), clinic (26.2%), and. hospital (21.4%). These three together made up the vast majority of locations.

Figure 18.2: Percentage of Iowans Reporting Ever Being Tested for HIV by Age and Gender, 2006



A new development in the HIV testing area is rapid testing. This gives the test taker the opportunity to know the results of their test without a lengthy interval in between the test and the results. During this interval many test takers can be lost to the process and not receive their results. When those people who had been tested for HIV within the past twelve months were asked if they had a rapid test, 14% said it was.

Comparison with Other States

The percentage of people age 18 through 64 who had a test for HIV ranged from 20.9% to 63.7%. There were only four sates with a lower percent being tested than Iowa at 26.2%. Six out of eight of the lowest tested states were in the upper Midwest. The median percent of people tested was 34.5%.

Table 18.1: Percentage of Iowans Tested for HIV/AIDS, 2006

DEMOGRAPHIC GROUPS	Had HIV Test	
	%	C.I. (95%)
TOTAL	26.2	(24.4-28)
SEX		
Male	23.4	(20.9-25.9)
Female	29.0	(26.6-31.4)
RACE/ETHNICITY		
Non-Hispanic White	25.0	(23.3-26.7)
Non-White or Other Hisp.	39.4	(31-47.9)
AGE		
18-24	24.6	(18.5-30.7)
25-34	43.2	(38.9-47.5)
35-44	33.0	(29.7-36.3)
45-54	18.5	(16-21)
55-64	8.8	(6.8-10.8)
EDUCATION		
Less than H.S.	29.6	(21.2-38)
H.S. or G.E.D.	21.9	(18.8-25)
Some Post-H.S.	27.5	(24.4-30.6)
College Graduate	28.4	(25.7-31.1)
HOUSEHOLD INCOME		
Less than $15,000	35.9	(27.9-43.9)
$15,000- 24,999	35.1	(28.6-41.6)
$25,000- 34,999	26.9	(21.2-32.6)
$35,000- 49,999	25.5	(21.6-29.4)
$50,000- 74,999	23.1	(19.8-26.4)
$75,000+	27.2	(23.9-30.5)

19. ORAL HEALTH

Background

During the last 50 years, there have been dramatic improvements in oral health, and most middle-aged and younger Americans expect to retain their natural teeth over their lifetimes. However, profound disparities remain that affect those without the resources to achieve good oral care or the knowledge of its importance. This fact inspired the first *Surgeon General's Report on Oral Health*, which identified a "silent epidemic" of dental and oral diseases and called for a national effort to improve Americans' oral health.[57]

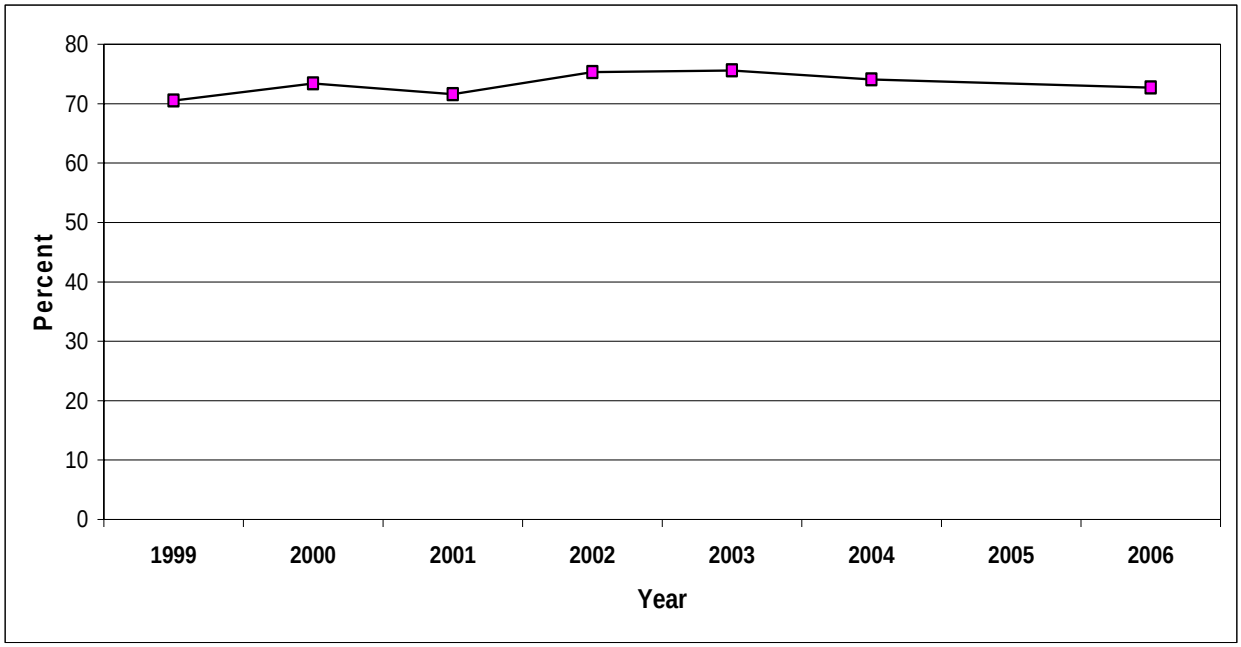
Oral health is integral to overall health. Left untreated, the pain and infection caused by dental disease can lead to problems in eating, speaking, the ability to learn, and the quality of life in general. A person may even die from oral based diseases.

Major barriers to oral health include socioeconomic factors, such as lack of dental insurance, the inability to pay for dental care out of pocket, or problems of access that involve transportation and the need to take time off from work for health needs. Many studies have documented poorer dental care among those in poverty, racial minorities, and those in rural areas.[57,67]

Oral Health Results

In 2006, 72.7% of Iowans surveyed reported visiting a dentist within the past year. However, 10.1% reported never having a dental visit or having their last dental visit more than five years ago. The percentage having annual dental visits shows a decline from the 74.1% found in 2004 This continues a downward trend in recent years (see figure 19.1).

Figure 19.1: Percentage of Iowans Having Annual Dental Visits by Year, 1999-2006



Females were more likely than males to report a dental visit during the past 12 months. Both higher education and greater income were related to the likelihood of visiting a dentist. Whites were more likely to have a dental visit than other race and ethnic groups. People of middle age were more likely to have a dental visit than either the younger or the older respondents. Respondents with an income of $75,000 or more had the highest proportion reporting recent dental visits (85.7%). At the other extreme, 49.7% of those with an annual household income less than $15,000 reported visiting a dentist in the past 12 months (see table 19.1).

Among respondents who had permanent teeth and who had visited a dentist, 73.1% had their teeth cleaned within the past 12 months. However, 1.2% had never had their teeth cleaned by a dentist or dental hygienist.

Table 19.1:
Percentage of Iowans Having Dental Visits within the Past 12 Months, 2006

DEMOGRAPHIC GROUPS	Last dental visit within 12 months	
	%	C.I. (95%)
TOTAL	72.7	(71.1-74.3)
SEX		
Male	69.1	(66.7-71.5)
Female	76.2	(74.4-78)
RACE/ETHNICITY		
White/Non-Hisp	73.6	(72-75.2)
Non-White or Hisp.	60.6	(52.7-68.4)
AGE		
18-24	72.2	(65.5-78.9)
25-34	68.8	(64.7-72.9)
35-44	75.5	(72.4-78.6)
45-54	74.8	(71.9-77.7)
55-64	75.6	(72.5-78.7)
65-74	71.9	(68.4-75.4)
75+	67.8	(64.2-71.4)
EDUCATION		
Less than H.S.	51.2	(44.3-58.1)
H.S. or G.E.D.	69.1	(66.6-71.6)
Some Post-H.S.	74.0	(71.1-76.9)
College Graduate	81.2	(78.7-83.7)
HOUSEHOLD INCOME		
Less than $15,000	49.7	(43.2-56.2)
$15,000- 24,999	55.5	(50.8-60.2)
$25,000- 34,999	64.2	(59.5-68.9)
$35,000- 49,999	73.3	(69.8-76.8)
$50,000- 74,999	81.4	(78.3-84.5)
$75,000+	85.7	(83.2-88.2)

A majority of 58% had no permanent teeth removed due to tooth decay or gum disease. On the other hand, 6% had all their permanent teeth removed. This percentage rose with increasing age, lower income, and lower education. It was highest for those with less than a high school education (21.9%).

Year 2010 Health Objectives for Iowa and the Nation

Healthy Iowans 2010 has as a goal that 75% of Iowans 65 years old or older should have an annual dental visit. In 2006, this was not met, with 69.8% of respondents 65 and over reporting an annual visit.

A *Healthy People 2010* goal is for 42% of Americans age 35 to 44 years old not to have had any permanent teeth extracted due to caries or periodontal disease. Iowa far exceeds this goal with 71% having no extractions.

A goal of both Healthy Iowans 2010 and Healthy People 2010 is to have no more than 20% of people age 65 and over with all their permanent teeth extracted. Iowa has achieved this goal having 19.8% of this population with all permanent teeth extracted.

20. MENTAL HEALTH

Background

Mental Health is a general term referring not only to the absence of a mental disorder, but also the ability of a person to successfully handle the daily challenges and social interactions of life.[39] Health is not merely physical health, but also mental health. Nor are these two independent of each other. Poor physical health can lead to poor mental health, and poor mental health can lead to poor physical health.

One of every five adults, or about 40 million Americans, experience some type of mental disorder every year. Over 19 million suffer from anxiety disorder, the most common mental illness. More than 18 million people experience a depressive disorder each year.[39] Although depressive disorders are somewhat less common than anxiety disorders, they are often more serious. Almost six percent of the population meets the criteria for serious mental illness.[42]

The combined indirect and related costs of mental illness are immense and include the costs of lost productivity; lost earnings due to illness; and societal costs, such as increased criminal-justice and family-caregiver costs. Clinical depression alone costs the United States $43.7 billion annually; anxiety disorders, $46.8 billion; and schizophrenia, $65 billion.

Mental health and mental disorders also have a significant impact on the total health-care system. Up to half of all visits to primary care physicians are due to conditions caused by or made worse by mental or emotional problems. People with depression are more than four times more likely to have a heart attack than those without such a history. Roughly 37% of alcohol abusers and 53% of drug abusers also have at least one serious mental illness.[39]

Mental Health Results

Data in this chapter will come from questions about emotional support, satisfaction, and a module to evaluate anxiety and depression.

When asked how often they got the emotional support they needed 51.8% of Iowans responded always and another 33.2% responded usually. Never was reported by 2.9%. Both people with low education and low income more often reported never getting emotional support. People with less than a high school education had 11.9% reporting never getting emotional support, while 11.8% of those with an annual household income less than $15,000 reported no support.

When asked in general how satisfied they were with their lives, 96.2% of Iowans reported either very satisfied or satisfied. Satisfaction was also less likely for lower education and lower income individuals. In no case was combined very satisfied and satisfied responses given by less than 80% of a particular group. The least satisfaction was reported by Iowans with incomes less than $15,000 per year. In this group 23.7% were very satisfied, 60.8% were satisfied. Combined this was 84.5%.

The anxiety and depression module contains ten questions. Results from the first eight of these make up a single measure of depression called PHQ8. The questions in the PHQ8 scale all ask

how many days in the past two weeks the respondent has felt a certain way. These are coded into numbers from zero to three and summed to obtain the PHQ8 score. The value of these scores which can range from zero to 24 can then be divided up to indicate five levels of depression. Due to small numbers in the highest three levels, they are combined here. Thus, only three levels of current depression are examined.

According to the PHQ8, 3.9% of adult Iowans are experiencing moderate to severe depression, and another 14.3% are experiencing mild depression. Moderate to severe depression was more frequent among those with lower income, lower education, racial/ethnic minorities, and the young (see table 20.1). Those with annual household incomes less than $15,000 had the greatest percent reporting current moderate to severe depression (19.6%), while those age 65 to 74 reported the lowest (1.8%).

Table 20.1: Current Depression in Iowans as Measured by the PHQ8 Scale, 2006

DEMOGRAPHIC GROUPS	No Depression		Mild Depression		Moderate to Severe Depression	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	81.7	(80.2-83.3)	14.3	(12.9-15.7)	3.9	(3.1-4.7)
SEX						
Male	82.0	(79.5-84.5)	13.7	(11.5-16)	4.3	(2.9-5.6)
Female	81.5	(79.7-83.3)	14.9	(13.3-16.6)	3.6	(2.7-4.5)
RACE/ETHNICITY						
White/Non-Hisp.	82.3	(80.8-83.8)	14.0	(12.7-15.4)	3.7	(3-4.4)
Non-White or Hisp.	73.5	(63.9-83.1)	19.0	(10.5-27.5)	7.5	(1-14.1)
AGE						
18-24	73.7	(66-81.4)	21.8	(14.5-29)	4.5	(0.6-8.4)
25-34	80.8	(77-84.6)	13.9	(10.6-17.1)	5.3	(2.9-7.7)
35-44	81.6	(78.7-84.5)	14.0	(11.4-16.6)	4.4	(2.8-5.9)
45-54	84.2	(81.6-86.8)	12.7	(10.3-15.2)	3.1	(2-4.2)
55-64	83.8	(81-86.5)	12.0	(9.6-14.4)	4.2	(2.6-5.9)
65-74	87.1	(84-90.1)	11.1	(8.2-14.1)	1.8	(0.8-2.9)
75+	81.4	(77.7-85.1)	16.4	(12.9-19.9)	2.2	(0.9-3.5)
EDUCATION						
Less than H.S.	69.7	(61.6-77.7)	16.5	(11.1-22)	13.8	(6.6-21)
H.S. or G.E.D.	80.7	(78-83.4)	14.9	(12.4-17.4)	4.4	(3-5.8)
Some Post-H.S.	80.6	(77.6-83.6)	16.1	(13.3-19)	3.3	(2.1-4.4)
College Graduate	86.2	(83.9-88.4)	11.7	(9.6-13.9)	2.1	(1.2-2.9)
HOUSEHOLD INCOME						
Less than $15,000	58.5	(50.4-66.6)	21.8	(15.8-27.8)	19.6	(11.9-27.4)
$15,000-24,999	74.3	(69.3-79.4)	21.5	(16.6-26.4)	4.1	(2.1-6.2)
$25,000-34,999	77.3	(72.8-81.7)	17.4	(13.4-21.5)	5.3	(3.1-7.5)
$35,000-49,999	82.1	(78.7-85.4)	15.0	(11.8-18.2)	2.9	(1.7-4.1)
$50,000-74,999	87.4	(84.4-90.4)	10.7	(7.8-13.6)	1.9	(0.8-3)
$75,000+	87.9	(85.2-90.6)	10.1	(7.8-12.5)	1.9	(0.5-3.4)

When asked if they had ever been diagnosed with depression, 14.7% said they had. More women and people with lower incomes, but fewer elderly said they had. More African Americans but fewer Hispanics said they had (see table 20.2) People with annual household incomes less than $15,000 reported the highest percent ever diagnosed with depression (30.2%), while Hispanics reported the least (7.5%).

When asked if they had ever been diagnosed with anxiety, 9.1% said they had. Anxiety was reported by more women, fewer Hispanics, more people in the middle age groups, and more people with low income (see table 20.2). The highest percent was found among people with an

Table 20.2: Iowans Ever Diagnosed with depression or Anxiety, 2006

DEMOGRAPHIC GROUPS	Ever had Depression		Ever had Anxiety	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	14.7	(13.5-15.9)	9.1	(8.1-10)
SEX				
Male	10.1	(8.3-11.9)	6.8	(5.4-8.2)
Female	19.0	(17.4-20.6)	11.2	(9.8-12.6)
RACE/ETHNICITY				
White/Non-Hisp.	14.9	(13.7-16.1)	9.2	(8.2-10.2)
Black/Non-Hisp	18.0	(8.4-27.5)	8.6	(1.5-15.7)
Other/Non-Hisp.	14.5	(6.4-22.6)	11.0	(3.7-18.3)
Hispanic	7.5	(3.2-11.9)	3.9	(0.8-7)
AGE				
18-24	15.9	(10.2-21.6)	7.4	(3.5-11.3)
25-34	15.5	(12.4-18.6)	12	(9.1-14.9)
35-44	14.5	(12.1-16.9)	10.4	(8.2-12.6)
45-54	18.6	(16.1-21.1)	9.3	(7.5-11.1)
55-64	15.1	(12.7-17.5)	8.6	(6.6-10.6)
65-74	10.2	(7.7-12.6)	7.3	(5.2-9.4)
75+	8.1	(6-10.3)	5.6	(3.7-7.4)
EDUCATION				
Less than H.S.	17.3	(12.2-22.4)	10.4	(6.7-14.1)
H.S. or G.E.D.	13.6	(11.6-15.6)	8.7	(7.1-10.3)
Some Post-H.S.	15.8	(13.3-18.3)	9.6	(7.6-11.6)
College Graduate	14.2	(12.2-16.2)	8.7	(7.1-10.3)
HOUSEHOLD INCOME				
Less than $15,000	30.2	(24.5-35.9)	19.9	(15-24.8)
$15,000-24,999	16.4	(13.3-19.5)	9.7	(7.2-12.2)
$25,000-34,999	16.6	(12.9-20.3)	8.8	(6.3-11.3)
$35,000-49,999	15.2	(12.5-17.9)	10.9	(8.5-13.3)
$50,000-74,999	11.7	(9-14.4)	5.4	(3.8-7)
$75,000+	12.6	(9.9-15.3)	8.9	(6.4-11.4)

annual household income less than $15,000 (19.9%), while the lowest percent was found among Hispanics (3.9%).

Reported days of bad mental health in the past 30 may be found in the chapter on general health status.

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APPENDIX 1

Year 2010 Health Objectives for the Nation: State Summary of BRFSS[1] Data for 2006

Healthy People 2010[7.4] Objective**	Yr 2010 Target	Iowa*, 2006
Health Insurance (Objective #1.1) Ages ≥18	100%	89.5%
Specific Source of Ongoing Primary Care (Objective #1.4c) Ages ≥18	96%	78.2%
Pap Smear, Ever Had (Objective #3.11a) Women, Ages ≥18	97%	95.4%
Pap Smear, Within Past Three Years (Objective #3.11b) Women, Ages ≥18	90%	86.1%
Fecal Occult Blood Test (FOBT) Within Past Two Years (Objective #3.12a) Ages ≥50	50%	24.9%
Sigmoidoscopy/Colonoscopy, Ever Had (Objective #3.12b) Ages ≥50	50%	55.8%
Mammogram, Within Past Two Years (Objective #3.14) Women, Ages ≥40	70%	77.5%
Influenza Immunization, Within Past Year (Objective #14.29a) Ages ≥65	90%	73.6%
Pneumococcal Pneumonia Vaccination, Ever Had (Objective #14.29b) Ages ≥65	90%	71.1%
Obese, BMI ≥ 30 (Objective #19.2) Ages ≥20	15%	26.7%
(No) Permanent Teeth Extracted Due to Caries or Periodontal Disease (Objective #21.3) Ages 35-44	42%	71.0%
Extraction of All Natural Teeth (Objective # 21.4) Ages ≥65	20%	19.8%
No Leisure Time Physical Activity (Objective # 22.1) Ages ≥18	20%	22.3%
Binge Drinking, During the Past Month (Objective #26.11c)[***] Ages ≥18	6%	20.5%
Cigarette Smoking (Objective #27.1a) Ages ≥18	12%	21.4%

* Behavioral Risk Factor Surveillance System

**In some cases, BRFSS definitions of objectives differ slightly from those in Healthy People 2010. See Healthy People 2010 for the exact definition of the objective.

***The BRFSS definition of binge drinking changed this year to five or more drinks on one occasion for men, but four drinks on one occasion for women.

Year 2010 Health Objectives for Iowa:
State Summary of BRFSS* Data for 2006

Healthy Iowans 2010[11.5] Objective**	Yr 2010 Target	Iowa, 2006
Health Insurance (Objective #1-1) Ages < 65	100%	87.3%
Mammogram, Within Past Two Years (Objective #2-5.1) Women, Ages ≥ 40	85%	77.5%
Pap Test, Within Past Three Years (Objective #2-6.1) Women, Ages ≥ 18	90%	86.1%
Fecal Occult Blood Test (FOBT) Within Past Two Years (Objective #2-7.1) Ages ≥ 50	55%	24.9%
Sigmoidoscopy/Colonoscopy, Ever Had (Objective #2-7.1) Ages ≥50	64%	55.8%
Diabetes Prevalence (Objective #3-1)	7.3%	7.3%
Influenza Immunization, Within Past Year (Objective #10-2) Ages >= 65	90%	73.6%
Pneumococcal Pneumonia Vaccination, Ever Had (Objective #10-2) Ages >= 65	90%	71.1%
Prevent a further rise in the percent of Iowans who are overweight (Objective 13.3)	38.3%	37.2%
Prevent a further rise in the percent of Iowans who are obese (Objective 13.3)	22.9%	25.7%
Extraction of All Natural Teeth (Objective #15.3) Ages ≥ 65	20%	19.8%
Had a dental visit within the past year (Objective #15-7) Ages ≥ 65	75%	69.8%
Do not increase percent of gamblers where gambling led to financial problems (Objective 20-7)	1.6%	1.1%
Do not increase percent of gamblers where gambling led to personal problems (Objective 20-7)	1.7%	1.0%
Exposure to secondhand Smoke at Work (Objective 21-4)	10%	18%
Not allowing smoking anywhere in the home (Objective 21.6)	69%	74.8%
Cigarette Smoking (Objective 21.7) Ages ≥ 18	18%	21.4%
Cigarette Smoking (Objective 21.7) Ages 18-24	28%	27.8%
Cigarette Smoking (Objective 21.7) Household Income < $25,000	25%	31.3%
Cigarette smokers who stopped smoking cigarettes for a day or more (Objective #21-7)	75%	49.2%

*Behavioral Risk Factor Surveillance System
**In some cases, BRFSS definitions of objectives differ slightly from those in Healthy Iowans2010. See Healthy Iowans2010 for the exact definition of the objective.

APPENDIX 2

Iowa 2006 Behavioral Risk Factor Surveillance System Questionnaire

Section 1: Health Status

1.1: Would you say that in general your health is:

1 Excellent
2 Very good
3 Good
4 Fair or
5 Poor

Section 2: Healthy Days - Health-related Quality of Life

2.1: Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?

__ __ Number of days
8 8 None

2.2: Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?

__ __ Number of days
8 8 None **If Q2.1 also "None", skip to next module**

If Q2.1 and Q2.2=88 (None), ⇨ Go to next section.

2.3: During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?

__ __ Number of days
8 8 None

Section 3: Health Care Access

3.1. Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare?

1 Yes
2 No

3.2: Do you have one person you think of as your personal doctor or health care provider?

If "No," ask: "Is there more than one, or is there no person who you think of as your personal doctor or health care provider?"

1 Yes, only one
2 More than one
3 No

3.3. Was there a time in the past 12 months when you needed to see a doctor but could not because of the cost?

1 Yes
2 No

3.4: About how long has it been since you last visited a doctor for a routine checkup? *A routine checkup is a general physical exam, not an exam for a specific injury, illness, or condition.*

1 Within past yr (anytime less than 12 months ago)
2 Within past 2 yrs (one year but less than 2 years ago)
3 Within past 5 yrs (two years but less than 5 years ago)
4 5 or more years ago
8 Never

Section 4: Exercise

4.1: During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?

1 Yes
2 No

Section 5: Diabetes

5.1: Have you ever been told by a doctor that you have diabetes?
(If "Yes" and respondent is female, ask: "Was this only when you were pregnant?")
(If Respondent says pre-diabetes or borderline diabetes, use response code 4.)

1 Yes
2 Yes, but female told only during pregnancy
3 No
4 No, pre-diabetes or borderline diabetes

Module 4: Diabetes

To be asked following core Q5.1 if response is "yes"

1. How old were you when you were told you have diabetes?
__ __Code age in years **[97 = 97 and older]**

2. Are you now taking insulin?
1 Yes
2 No

3. Are you now taking diabetes pills?
1 Yes
2 No

4. About how often do you check your blood for glucose or sugar? Include times when checked by a family member or friend, but do not include times when checked by a health professional.
1 __ __Times per day
2 __ __Times per week
3 __ __Times per month
4 __ __Times per year
8 8 8 Never

5. About how often do you check your feet for any sores or irritations? Include times when checked by a family member or friend, but do not include times when checked by a health professional.
1 __ __Times per day
2 __ __Times per week
3 __ __Times per month
4 __ __Times per year
8 8 8 Never
5 5 5 No feet

6. Have you ever had any sores or irritations on your feet that took more than four weeks to heal?
1 Yes
2 No

7. About how many times in the past 12 months have you seen a doctor, nurse, or other health professional for your diabetes?
__ __Number of times **[76 = 76 or more]**
8 8 None

8. A test for "A one C" measures the average level of blood sugar over the past three months. About how many times in the past 12 months has a doctor, nurse, or other health professional checked you for "A one C"?
__ __Number of times **[76 = 76 or more]**
8 8 None
9 8 Never heard of "A one C" test

If 5 5 5 "no feet" to Q5, go to Q10

9. About how many times in the past 12 months has a health professional checked your feet for any sores or irritations?
__ __ Number of times **[76 = 76 or more]**
8 8 None

10. When was the last time you had an eye exam in which the pupils were dilated? This would have made you temporarily sensitive to bright light.
1 Within the past month (anytime less than 1 month ago)
2 Within the past year (1 month but less than 12 months ago)
3 Within the past 2 years (1 year but less than 2 years ago)
4 2 or more years ago
8 Never

11. Has a doctor ever told you that diabetes has affected your eyes or that you had retinopathy?
1 Yes
2 No

12. Have you ever taken a course or class in how to manage your diabetes yourself?
1 Yes
2 No

Section 6: Oral Health
6.1: How long has it been since you last visited a dentist or a dental clinic? Include visits to dental specialists, such as orthodontists**.**
1 Within the past year (anytime less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years ago)
3 Within the past 5 years (2 years but less than 5 years ago)
4 5 or more years ago
8 Never

6.2: How many of your permanent teeth have been removed because of tooth decay or gum disease? Do not include teeth lost for other reasons, such as injury or orthodontics.
NOTE: If wisdom teeth are removed because of tooth decay or gum disease, they should be included in the count for lost teeth.
1 1 to 5
1 6 or more but not all
2 All
8 None

If Q6.1 = Never or Q6.2= All, go to next section
6.3: How long has it been since you had your teeth "cleaned" by a dentist or dental hygienist?
1 Within the past year (anytime less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years ago)
3 Within the past 5 years (2 years but less than 5 years ago)
4 5 or more years ago
8. Never

Section 7: Cardiovascular Disease Prevalence
Now I would like to ask you some questions about cardiovascular disease.
Has a doctor, nurse, or other health professional EVER told you that you had any of the following?
For each, tell me **"**Yes**"**, **"**No**"**, or you're **"**Not sure**"**:
7.1: (Ever told) you had a heart attack, also called a myocardial infarction?
1 Yes
2 No

7.2: (Ever told) you had angina or coronary heart disease?
1 Yes
2 No

7.3: (Ever told) you had a stroke?
1 Yes
2 No

Section 8: Asthma
8.1: Have you ever been told by a doctor, nurse or other health professional that you had asthma?
1 Yes
2 No ⇨**Go to next section**

8.2: Do you still have asthma?
1 Yes
2 No

Section 9: Disability
The following questions are about health problems or impairments you may have.
9.1: Are you limited in any way in any activities because of physical, mental, or emotional problems ?
1 Yes
2 No

9.2: Do you now have any health problem that requires you to use special equipment, such as a cane, a wheelchair, a special bed, or a special telephone?
Include occasional use or use in certain circumstances
1 Yes
2 No

Section 10: Tobacco Use
10.1: Have you smoked at least 100 cigarettes in your entire life?
5 packs = 100 cigarettes
1 Yes
2 No ⇨**Go to next section**

10.2: Do you now smoke cigarettes every day, some days, or not at all?
1 Every day
2 Some days
3 Not at all **Go to next section**

10.3: During the past 12 months, have you stopped smoking for one day or longer because you were trying to quit smoking?
1 Yes
2 No

Section 11: Demographics
11.1: What is your age?
__ __ Code age in years

11.2: Are you Hispanic or Latino?
1 Yes
2 No

11.3: Which one or more of the following would you say is your race?
Mark all that apply
1 White
2 Black or African American
3 Asian
4 Native Hawaiian or Other Pacific Islander
5 American Indian, Alaska Native or
6 Other **[specify]**

If more than one response to Q11.3, continue. Otherwise, go to Q11.5

11.4: Which one of these groups would you say best represents your race?
1 White
2 Black or African American
3 Asian
4 Native Hawaiian or Other Pacific Islander
5 American Indian, Alaska Native
6 Other **[specify]**

11.5: Are you:
1 Married
2 Divorced
3 Widowed
4 Separated
5 Never married or
6 A member of an unmarried couple

11.6: How many children less than 18 years of age live in your household?
__ __ Number of children
8 8 None

11.7: What is the highest grade or year of school you completed?
1 Never attended school or only attended kindergarten
2 Grades 1 through 8 (Elementary)
3 Grades 9 through 11 (Some high school)
4 Grade 12 or GED (High school graduate)
5 College 1 year to 3 years (Some college or technical school)
6 College 4 years or more (College graduate)

11.8: Are you currently:
1 Employed for wages
2 Self-employed
3 Out of work for more than 1 year
4 Out of work for less than 1 year
5 A Homemaker
6 A Student
7 Retired or
8 Unable to work

11.9: Is your annual household income from all sources:
01 Less than $10,000
02 $10,000 to less than $15,000
03 $15,000 to less than $20,000
04 $20,000 to less than $25,000
05 $25,000 to less than $35,000
06 $35,000 to less than $50,000
07 $50,000 to less than $75,000
08 $75,000 or more

11.10: About how much do you weigh without shoes?
If respondent answers in metric, put "9" in the first position, Round fractions up
__ __ __ Weight pounds/kilograms

11.11: About how tall are you without shoes?
If respondent answers in metric, put "9" in the first position, Round fractions down
__/__ __ Height ft/inches/meters/centimeters

11.12: What county do you live in?
__ __ _ County name

11.13: What is your ZIP Code where you live?
_ _ _ _ _ ZIP Code

11.14 Do you have more than one telephone number in your household? Do not include cell phones or numbers that are only used by a computer or fax machine.
1 Yes
2 No ⇨ **Go to Q11.16**

11.15: How many of these are residential numbers?
__ Residential telephone numbers **[6=6 or more]**

11.16: During the past 12 months, has your household been without telephone service for 1 week or more?
Note: Do not include interruptions of phone service due to weather or natural disasters.
1 Yes
2 No

11.17: Indicate sex of respondent. **Ask only if necessary**.
1 Male ⇨ **Go to next section.**
2 Female **If respondent 45 years old or older, go to next section**

11.18: To your knowledge, are you now pregnant?
1 Yes
2 No

Section 12: **Veteran's Status**
12.1 The next question relates to military service. Have you ever served on active duty in the United States Armed Forces, either in the regular military or in a National Guard or military reserve unit?
1 Yes
2 No

Section 13: Alcohol Consumption
13.1: During the past 30 days, have you had at least one drink of any alcoholic beverage such as beer, wine, a malt beverage or liquor?
1 Yes
2 No ⇨**Go to next section**

13.2: During the past 30 days, how many days per week or per month did you have at least 1 drink of any alcoholic beverage?
1 __ __ Days per week
2 __ __ Days in past 30
8 8 8 No drinks in past 30 days **Go to next section**

13.3: One drink is equivalent to a 12 ounce beer, a 5 ounce glass of wine, or a drink with one shot of liquor. During the past 30 days, on the days when you drank, about how many drinks did you drink on the average?
__ __Number of drinks

13.4: Considering all types of alcoholic beverages, how many times during the past 30 days did you have **X [X = 5 for men, X = 4 for women]** or more drinks on one occasion?
__ __Number of times
8 8 None

13.5: During the past 30 days, what is the largest number of drinks you had on any occasion?
_ _ Number

Section 14: Immunization
14.1: A flu shot is an influenza vaccine injected in your arm. During the past 12 months, have you had a flu shot?
1 Yes
2 No

14.2: During the past 12 months, have you had a flu vaccine that was sprayed in your nose? The flu vaccine that is sprayed in the nose is also called FluMist™.
1 Yes
2 No

[Questions 14.3-14.8 were placed in the questionnaire in case they were needed that were never used]

14.9: A pneumonia shot or pneumococcal vaccine is usually given only once or twice in a person's lifetime and is different from the flu shot. Have you ever had a pneumonia shot?.
1 Yes
2 No

14.10: Have you EVER received the hepatitis B vaccine? The hepatitis B vaccine is completed after the third shot is given.
1 Yes
2 No

14.11: Tell me if ANY of these statements is true for YOU. Do NOT tell me WHICH statement or statements are true for you, just if ANY of them are:

You have hemophilia and have received clotting factor concentrate
You are a man who has had sex with other men, even just one time **[skipped if female]**
You have taken street drugs by needle, even just one time
You traded sex for money or drugs, even just one time
You have tested positive for HIV
You have had sex (even just one time) with some-one who would answer "yes" to any of these state-ments
You had more than two sex partners in the past year

Are any of these statements true for you?
1 Yes, at least one statement is true
2 No, none of these statements is true

Section 15: Falls
If respondent is 45 years or older continue, otherwise go to next section.
The next questions ask about recent falls. By a fall, we mean when a person unintentionally comes to rest on the ground or another lower level.
15.1**:** In the past 3 months, how many times have you fallen?
_ _ Number of times **[76 = 76 or more]**
8 8 None **[Go to next section]**

15.2: Did this fall cause an injury? **Or,** Did any of these falls cause an injury?
By an injury, we mean the fall caused you to limit your regular activities for at least a day or to go see a doctor.
_ _ Number of falls **[76 = 76 or more]**
8 8 None **[Go to next section]**

Section 16: Seatbelt Use
16.1: How often do you use seat belts when you drive or ride in a car? Would you say …
Please read:
1 Always
2 Nearly always
3 Sometimes
4 Seldom
5 Never
8 Never drive or ride in a car

Section 17: Drinking and driving
note: If Q13.1 = 2 (No); go to Section 18.
If Q16.1 = 8 (Never drive or ride in a car), go to Section 18; otherwise continue.
17.1: During the past 30 days, how many times have you driven when you've had perhaps too much to drink?
_ _ Number of times
8 8 None

Section 18: Women's Health
If respondent is male, go to next module.
The next questions are about breast and cervical cancer.
18.1: A mammogram is an x-ray of each breast to look for breast cancer. Have you ever had a mammogram?
1 Yes
2 No **Go to Q18.3**

18.2: How long has it been since you had your last mammogram?
1 Within the past year (anytime less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years ago)
3 Within the past 3 years (2 years but less than 3 years ago)
4 Within the past 5 years (3 years but less 5 years ago)
5 5 or more years ago

18.3: A clinical breast exam is when a doctor, nurse or other health professional feels the breast for lumps. Have you ever had a clinical breast exam?
1 Yes
2 No **Go to Q18.5**

18.4: How long has it been since your last breast exam?
1 Within the past year (anytime less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years ago)
3 Within the past 3 years (2 years but less than 3 years ago)
4 Within the past 5 years (3 years but less than 5 years ago)
5 5 or more years ago

18.5: A Pap test is a test for cancer of the cervix. Have you ever had a Pap test?
1Yes
2 No **Go to Q18.7**

18.6: How long has it been since you had your last Pap test?
1 Within the past year (anytime less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years ago)
3 Within the past 3 years (2 years but less than 3 years ago)
4 Within the past 5 years (3 years but less than 5 years ago)
5 5 or more years ago

NOTE: If response to core Q13.18 = 1 (is pregnant) then go to next section.
18.7: Have you had a hysterectomy?
A hysterectomy is an operation to remove the uterus (womb)
1 Yes
2 No

Section 19: Prostate Cancer Screening
Note: If respondent is ≤39 years of age, or is female, go to next section.
Now, I will ask you some questions about prostate cancer screening.
19.1: A Prostate-Specific Antigen test, also called a PSA test, is a blood test used to check men for prostate cancer. Have you ever had a PSA test?
1 Yes
2 No **[Go to Q19.3]**

19.2: How long has it been since you had your last PSA test?
Read only if necessary:
1 Within the past year (anytime less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years)
3 Within the past 3 years (2 years but less than 3 years)
4 Within the past 5 years (3 years but less than 5 years)
5 5 or more years ago

19.3: A digital rectal exam is an exam in which a doctor, nurse, or other health professional places a gloved finger into the rectum to feel the size, shape, and hardness of the prostate gland. Have you ever had a digital rectal exam?
1 Yes
2 No **[Go to Q19.5]**

19.4: How long has it been since your last digital rectal exam?
Read only if necessary:
1 Within the past year (anytime less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years)
3 Within the past 3 years (2 years but less than 3 years)
4 Within the past 5 years (3 years but less than 5 years)
5 5 or more years ago

19.5: Have you ever been told by a doctor, nurse, or other health professional that you had prostate cancer?
1 Yes
2 No

Section 20: **Colorectal Cancer Screening**
Note: If respondent is ≤ 49 years of age, go to next section
20.1: A blood stool test is a test that may use a special kit at home to determine whether the stool contains blood. Have you ever had this test using a home kit?
1 Yes
2 No **Go to Q20.3**

20.2: How long has it been since you had your last blood stool test using a home kit?
1 Within the past year (anytime less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years ago)
3 Within the past 5 years (2 years but less than 5 years ago)
4 5 or more years ago

20.3: Sigmoidoscopy and colonoscopy are exams in which a tube is inserted in the rectum to view the colon for signs of cancer or other health problems. Have you ever had either of these exams?
1 Yes
2 No **Go to next section**

20.4: How long has it been since you had your last sigmoidoscopy or colonoscopy?
1 Within the past year (anytime less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years ago)
3 Within the past 5 years (2 years but less than 5 years ago)
4 Within the past 10 years (5 years but less than10 years ago)
5 10 or more years ago

Section 21: HIV/AIDS
If respondent is 65 years old or older, go to next section
The next few questions are about the national health problem of **HIV,** the virus that causes AIDS. Please remember that your answers are strictly confidential and that you don't have to answer **every** question if you don't want to. Although we will ask you about testing, we will not ask you about the results of any test you may **have had.**

21.1: Have you ever been tested for HIV? Do not count tests you may have had as part of a blood donation.
Include tests using fluid from your mouth.
1 Yes
2 No ⇨ Go to next section

21.2: Not including blood donations, in what month and year was your last HIV test?
Note: If response is before January 1985, code "Don't know".
Include saliva tests
__ __/__ __ __ __ Code month and year

21.3: Where did you have your last HIV test–at a private doctor or HMO, at counseling and testing site, at a hospital, at a clinic, in a jail or prison, **in a drug treatment facility,** at home, or somewhere else?
01 Private doctor or HMO office
02 Counseling and testing site
03 Hospital
04 Clinic
05 In a jail or prison (or other correctional facility)
06 Drug treatment facility
07 at Home
08 Somewhere else

Note: Ask Q21.4 only if Q21.2 is within the last 12 months; otherwise go to the next section
21.4: Was it a rapid test where you could get your results within a couple of hours
1 Yes
2 No

Section22: Emotional Support & Life Satisfaction
The next two questions are about emotional support and your satisfaction with life.
22.1: How often do you get the social and emotional support you need?
INTERVIEWER NOTE: If asked, say "please include support from <u>any</u> source".
1 Always
2 Usually
3 Sometimes
4 Rarely
5 Never

22.2: In general, how satisfied are you with your life?
1 Very satisfied
2 Satisfied
3 Dissatisfied
4 Very dissatisfied

Module 1: Random Child Selection
If response to core Q11.6 is '88' (none) or '99' (refused) go to next Module.
If Core Q11.6= 1; <u>INTERVIEWER</u>: "Previously, you indicated there was one child age 17 or younger in your household. I would like to ask you some questions about that child." ⇨**Go to Q1**.

If Core 11.6 is > 1 and Core Q11.6 does not equal to 88 or 99; <u>INTERVIEWER</u>: "Previously, you indicated there were [number] children age 17 or younger in your household. Think about those [number] children in order of their birth, from oldest to youngest. The oldest child is the first child and the youngest child is the last. Please include children with the same birth date, including twins, in the order of their birth."

CATI INSTRUCTION: RANDOMLY SELECT ONE OF THE CHILDREN. This is the "Xth" child. Please substitute "Xth" child's number in all questions below.

<u>INTERVIEWER</u>: "I have some additional questions about one specific child. The child I will be referring to is the "Xth child in your household. All following questions about children will be about the "Xth" child."

1. What is the birth month and year of the "**Xth**" child?
_ _ /_ _ _ _ Code month and year

2. Is the child a boy or a girl?
1 Boy
2 Girl

3. Is the child Hispanic or Latino?
1 Yes
2 No

4. Which one or more of the following would you say is the race of the child?
[Check all that apply]
1 White
2 Black or African American
3 Asian
4 Native Hawaiian or Other Pacific Islander
5 American Indian, Alaska Native
6 Other [specify] _____

If more than one response to Q4; continue. Otherwise, ⇨Go to Q6.

5. Which one of these groups would you say best represents the child's race?
1 White
2 Black or African American
3 Asian
4 Native Hawaiian or Other Pacific Islander
5 American Indian, Alaska Native
6 Other

6. How are you related to the child?
1 Parent (mother or father) include biologic, step or adoptive parent
2 Grandparent
3 Foster parent or guardian [other than parent or grandparent]
4 Sibling (brother or sister) include biologic, step and adoptive sibling
5 Other relative
6 Not related in any way

Module 3: Childhood Asthma Prevalence

If response to core Q11.6 is '88' (none) or '99' (refused) go to next module.

The next two questions are about the "Xth" child.
1. Has a doctor, nurse or other health professional EVER said that the child has asthma
1 Yes
2 No ⇨**Go to next module**

2. Does the child still have asthma?
1 Yes
2 No

STATE ADDED HEALTH INSURANCE

SAHIQ1. Have you heard of Iowa's Child Health Insurance Program, called Hawk-I?
1 Yes
2 No

STATE ADDED ACCESS

SAAQ1: An acute illness could be any physical or mental health condition that lasts for a short time, such as a few days or weeks. Have you seen a doctor or other health care provider within the past year for an acute illness?
1 Yes
2 No **[Go to SAAQ3]**

SAAQ2**:** What types of health care providers have treated you in the past year for a physical or mental health condition that lasted only for a short time?
SELECT ALL THAT APPLY
11 Physician
12 Psychiatrist
13 Dentist
14 Psychologist
15 Physician Assistant (PA)
16 Nurse or Nurse Practitioner
17 Social Worker
18 Marital or Family Therapist
19 Other type of health care provider

SAAQ3: When you are sick, how long does it usually take to get in to see a health care provider?
1 0-2 days
2 3-6 days
3 1-2 weeks
4 more than 2 weeks

Module 10: Secondhand Smoke Policy

1. Which statement best describes the rules about smoking inside your home?
1 Smoking is not allowed anywhere inside your home
2 Smoking is allowed in some places or at some times
3 Smoking is allowed anywhere inside the home or
4 There are no rules about smoking inside the home

If "employed" or "self-employed" to core Q11.8, continue. Otherwise, go to module 14.

2. While working at your job, are you indoors most of the time?
1 Yes
2 No ⇨ **Go to Module 14**

3. Which of the following best describes your place of work's official smoking policy for indoor public or common areas, such as lobbies, rest rooms, and lunch rooms?
Note: For workers who visit clients or work at home, "place of work" means their base location. For self-employed persons who work at home, the official smoking policy means the home smoking policy.
1 Not allowed in any public areas
2 Allowed in some public areas
3 Allowed in all public areas or
4 No official policy

4. Which of the following best describes your place of work's official smoking policy for work areas?
1 Not allowed in any work areas
2 Allowed in some work areas
3 Allowed in all work areas or
4 No official policy

STATE ADDED TOBACCO
Note: If Core Q11.8>2, go to Module 14
SATQ1: While at your job, how many hours a day can you smell the smoke from other people's cigarettes, cigars, and/or pipes?
___ = HOURS PER DAY
01 – 24 Hours per day
8 8 Never

Module 14: **Anxiety and Depression**
Now, I am going to ask you some questions about your mood. When answering these questions, please think about how many days each of the following has occurred in the past 2 weeks.

1. Over the last 2 weeks, how many days have you had little interest or pleasure in doing things?
_ _ 01-14 days
8 8 None

2. Over the last 2 weeks, how many days have you felt down, depressed or hopeless?
_ _ 01-14 days
8 8 None

3. Over the last 2 weeks, how many days have you had trouble falling asleep or staying asleep or sleeping too much?
_ _ 01-14 days
8 8 None

4. Over the last 2 weeks, how many days have you felt tired or had little energy?
_ _ 01-14 days
8 8 None

5. Over the last 2 weeks, how many days have you had a poor appetite or eaten too much?
_ _ 01-14 days
8 8 None

6. Over the last 2 weeks, how many days have you felt bad about yourself or that you were a failure or had let yourself or your family down?
_ _ 01-14 days
8 8 None

7. Over the last 2 weeks, how many days have you had trouble concentrating on things, such as reading the newspaper or watching the TV?
_ _ 01-14 days
8 8 None

8. Over the last 2 weeks, how many days have you moved or spoken so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you were moving around a lot more than usual?
_ _ 01-14 days
8 8 None

9. Has a doctor or other healthcare provider ever told you that you had an anxiety disorder (including acute stress disorder, anxiety, generalized anxiety disorder, obsessive-compulsive disorder, panic disorder, phobia, posttraumatic stress disorder, or social anxiety disorder)?
1 Yes
2 No

10. Has a doctor or other healthcare provider ever told you that you have a depressive disorder (including depression, major depression, dysthymia, or minor depression)?
1 Yes
2 No

State Added Colorectal Cancer Screening
[ASK IF AGE > 49]
SACCSQ1. Has a health care provider ever talked to you about being tested for colorectal or colon cancer?
1 Yes
2 No **Go to SACCAQ1**

SACCSQ2. What test did your health care provider recommend?
1 Blood Stool Kit
2 Sigmoidoscopy or colonoscopy (exams in which a tube is inserted in the rectum to view the colon for signs of cancer or other health problems)
3 Other test
4 Recommended both Blood Stool Kit and sigmoidoscopy or Colonoscopy **[Go to SACCSQ3b]**
5 Did not recommend a test **Go to SACCAQ1**

SACCSQ3a. Did you have the test your health care provider recommended?
1 Yes **Go to SACCAQ1**
2 No [**If SACCSQ2=1 then GO TO SACCSQ4**
If SACCSQ2=2 then GO TO SACCSQ5
If SACCSQ2=3, go to SACCAQ1]

SACCSQ3b. Did you have the tests your health care provider recommended?
1 Yes Go to SACCAQ1
2 No did not have either [**GO TO SACCSQ4]**
3 No, but only did not have blood stool kit [**GO TO SACCSQ4]**
4 No, but only did not have sigmoidoscopy/colonoscopy **[GO TO SACCSQ5]**

SACCSQ4. What is the main reason you did not have a blood stool test using a home kit?
11 No symptoms
12 No family history of colorectal cancer
13 Cost/Not covered by insurance
14 Too old to have test
15 Too young to have test
16 No time
17 Test is distasteful
18 Embarrassment
19 Fear of finding cancer
20 Don't want to do the prep
21 Don't know where to get the test
22 Don't know how to do the test
23 Other

If SACCSQ3b = 2, continue; else go to SACCAQ1
SACCSQ5. What is the main reason you did not have a sigmoidoscopy or colonoscopy?
11 No symptoms
12 No family history of colorectal cancer
13 Cost/Not covered by insurance
14 Too old to have test
15 Too young to have test
16 No time
17 Test is distasteful
18 Embarrassment
19 Fear of finding cancer
20 Don't know where to get the exam
21 Don't want to do the bowel/colon prep
22 Distance to travel for the test
23 No transportation available
24 Too long a wait for an appointment
25 Other

State Added Colorectal Cancer Advertising
[ASKED IF AGE > 49]
SACCAQ1. In the past 6 months, have you seen any articles or advertising about the risks of colorectal cancer?
1 Yes
2 No **Go to SACCAQ3**

SACCAQ2. Where did you see this article or advertisement about the risks of colorectal cancer?
[IF MORE THAN ONE, SELECT MOST FREQUENTLY SEEN]
1 Magazine
2 Doctor's Office
3 Television
4 Radio
5 Health Newsletter
6 Other

SACCAQ3. In the past 6 months, have you seen any articles or advertising about the potential benefits of early detection of colorectal cancer?
1 Yes
2 No **Go to SACCKQ1**

SACCAQ4. Where did you see this article or advertisement about the potential benefits of early detection of colorectal cancer?
[IF MORE THAN ONE, SELECT MOST FREQUENTLY SEEN]
1 Magazine
2 Doctor's Office
3 Television
4 Radio
5 Health Newsletter
6 Other

State Added Colorectal Cancer Knowledge
SACCKQ1**.** Next, I'm going to read you several statements about colorectal cancer. After I read each one, please tell me if you strongly agree, somewhat agree, somewhat disagree or strongly disagree.
A person's age is considered a risk factor for developing colorectal cancer. Would you say...
1 Strongly agree,
2 Somewhat agree,
3 Neither agree nor disagree,
4 Somewhat disagree, or
5 Strongly disagree?

SACCKQ2. A person's race or ethnicity is considered a risk factor for developing colorectal cancer. Would you say...
1 Strongly agree,
2 Somewhat agree,
3 Neither agree nor disagree,
4 Somewhat disagree, or
5 Strongly disagree?

SACCKQ3. A person's gender is considered a risk factor for developing colorectal cancer. Would you say...
1 Strongly agree,
2 Somewhat agree,
3 Neither agree nor disagree,
4 Somewhat disagree, or
5 Strongly disagree?

SACCKQ4. Colorectal cancer in a blood relative is considered a risk factor for developing colorectal cancer. Would you say...
1 Strongly agree,
2 Somewhat agree,
3 Neither agree nor disagree,
4 Somewhat disagree, or
5 Strongly disagree?

SACCKQ5. A person's use of tobacco is considered a risk factor for developing colorectal cancer. Would you say...
1 Strongly agree,
2 Somewhat agree,
3 Neither agree nor disagree,
4 Somewhat disagree, or
5 Strongly disagree?

SACCKQ6. A person's diet is considered a risk factor in developing colorectal cancer. Would you say...
1 Strongly agree,
2 Somewhat agree,
3 Neither agree nor disagree,
4 Somewhat disagree, or
5 Strongly disagree?

SACCKQ7. A person's weight is considered a risk factor in developing colorectal cancer. Would you say...
1 Strongly agree,
2 Somewhat agree,
3 Neither agree nor disagree,
4 Somewhat disagree, or
5 Strongly disagree?

SACCKQ8. A person's alcohol intake is considered a risk factor in developing colorectal cancer. Would you say...
1 Strongly agree,
2 Somewhat agree,
3 Neither agree nor disagree,
4 Somewhat disagree, or
5 Strongly disagree?

State Added Colorectal Cancer Risk
SACCRQ1. In terms of your own risk, what would you say your chances are of developing colorectal cancer? Would you say ...
1 High,
2 Medium,
3 Low, or
4 None?

STATE ADDED PHYSICAL ACTIVITY
SAPAQ1. How many hours a day do you watch TV or videos or use the computer for leisure activities?
01-24 hours per day
66. Less than daily
88. Does not use TV/videos/computer

SAPAQ2. How often do you take a walk to get exercise?
11 Every day or almost every day
12 3-5 times a week
13 2 times a week
14 Once a week
15 Less than once a week
16 Once a month
17 Hardly ever
18 Never
19 Unable to walk

STATE ADDED CARDIOVASCULAR
SACQ1 To lower your risk of developing heart disease or stroke, are you …
a. Eating fewer high fat or high cholesterol foods?
1 Yes
2 No

b. Eating more fruits and vegetables?
1 Yes
2 No

c. More physically active?
1 Yes
2 No

Module 15: Sexual Violence
Now I'd like to ask you some questions about some different types of physical and / or sexual violence or other unwanted sexual experiences. This information will allow us to better understand the problem of violence and unwanted sexual contact, and may help others in the future. This is a sensitive topic. Some people may feel uncomfortable with these questions. At the end of this section I will give you phone numbers for organizations that can provide information and referral for these issues. Please keep in mind that if you are not in a safe place u can ask me to skip any question that you do not want to answers.

Are you in a safe place to answer these questions?
1 Yes
2 No **[Go to closing statement]**

My first questions are about unwanted sexual experiences you may have had.
1. In the past 12 months, has anyone touched sexual parts of your body after you said or showed that you didn't want them to or without your consent (for example being groped or fondled)?
1 Yes
2 No

2. In the past 12 months, has anyone exposed you to unwanted sexual situations that did not involve physical touching? Examples include things like sexual harassment, someone exposing sexual parts of their body to you, being seen by a peeping Tom, or someone making you look at sexual photos or movies?
1 Yes
2 No

Now, I am going to ask you questions about unwanted sex. Unwanted sex includes things like putting anything into your vagina **[If female]**, anus, or mouth or making you do these things after you said or showed that you didn't want to.
It includes times when you were unable to consent, for example, you were drunk or asleep, or you thought you would be hurt or punished if you refused.
3. Has anyone EVER had sex with you after you said or showed that you didn't want them to or without your consent?
1 Yes
2 No [**Go to Q5]**

4. Has this happened in the past 12 months?
1 Yes
2 No

5. Has anyone EVER ATTEMPTED to have sex with you after you said or showed that you didn't want to or without your consent, BUT SEX DID NOT OCCUR?
1 Yes
2 No ⇨ **Go to Q7**

6. Has this happened in the past 12 months?
1 Yes
2 No

CATI note: If Q3 = 1 (Yes) or Q5 = 1 (Yes); continue. Otherwise, read closing statement.
7. Think about the time of the most recent incident involving a person who ***had sex with you*** –or- ***attempted to have sex with you*** after you said or showed that you didn't want to or without your consent? What was that person's relationship to you?
0 1 Current boyfriend /girlfriend
0 2 Former boyfriend/ girlfriend
0 3 Fiancé
0 4 Spouse or live-in partner
0 5 Former Spouse or Former live-in partner
0 6 Someone you were dating
0 7 First Date
0 8 Friend
0 9 Acquaintance
1 0 A person known for less than 24 hours
1 1 Complete stranger
1 2 Parent
1 3 Step-parent
1 4 Parent's partner
1 5 Parent in-law
1 6 Other relative
1 7 Neighbor
1 8 Co-worker
1 9 Other non-relative
2 0 Multiple perpetrators **[Go to closing statement**

8. Was the person who did this male or female?
1 Male
2 Female

Closing Statement: We realize that this topic may bring up past experiences that some people may wish to talk about. If you or someone you know would like to talk to a trained counselor, please call **1-800-656-HOPE (4673)**. Would you like me to repeat this number?

STATE ADDED GAMBLING
I have just a few more questions and we'll be finished.
SAGQ1. Have you gambled in the last 12 months?
1 Yes
2 No **[SKIP TO CLOSING**]

SAGQ2. Has the money you spent gambling let to financial problems?
1 Yes
2 No

SAGQ3. Has the time you spent gambling led to problems in your family, work, or personal life?
1 Yes
2 No